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FOURTH QUARTERLY DATA REPORT
FOR THE
TERRESTRIAL BASELINE DATA ACCUMULATION PROGRAM
RIO BLANCO OIL SHALE PROJECT

submitted to
RIO BLANCO OIL SHALE PROJECT
Denver, Colorado

from
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EXECUTIVE SUMMARY

Ecology Consultants, Incorporated has been contracted to perform a Terrestrial Baseline Data Accumulation Program for RBOSP on Tract C-a. Communication of the scope and results of that program will be accomplished in a series of quarterly reports. This fourth report of that series contains details of revised methodology (wherever relevant), summarized results, and preliminary interpretations for those terrestrial programs conducted during the quarter June through August, 1975. In addition this report presents computer summaries of vegetation, small mammal and avifauna data gathered during the period October, 1974 through August 1975. Future quarterly reports will include an update of the developing data base for each subsequent quarter as well as any approved program modifications. Definitive interpretations and a synthesis of program results will be developed in the Second Annual Report.

INTRODUCTION

This report presents and summarizes terrestrial baseline data gathered during the fourth quarter (June through August, 1975) on Oil Shale Tract C-a and its environs. In addition, computer summaries of all vegetation, small mammal and avifauna data gathered from the beginning of the program in October, 1974 through August, 1975 are presented. A detailed description of new field methodology is included for all elements of the revised terrestrial program not included in the previous quarterly report. Only data gathered during the summer quarter are reported for large mammal, herpetofauna, invertebrate and mammalian predator program elements. In the results sections of this report only data gathered during the reporting quarter are discussed. However, in the summary and conclusions sections for vegetation, small mammals and avifauna, preliminary consideration is given to seasonal trends observed through all sampling periods. All raw data reported for the summer quarter are organized in appendices which appear as separate sub-sections under each of the major categories of investigation.

2.3 Terrestrial Studies

2.3.1 Vegetation

2.3.1.1 Introduction

The objectives of vegetation investigations in the vicinity of Tract C-a are to identify the plant species present (floristics); define the structural and compositional organization of these species in recognizable associations (phytosociology); correlate floristics and phytosociology with environmental, biotic and historic usage factors, and map the predominant vegetation types. The emphasis in this progress report will be to present the floristic composition and phytosociology of predominant vegetation types sampled, noting the most important ecological relationships.

2.3.1.2 Methods

2.3.1.2.1 Phytosociological Investigations

Aerial photographs and pertinent literature were used to identify the major vegetation types on and adjacent to Tract C-a. A preliminary selection of sampling locations in each type was made from aerial photographs to assure good coverage of the entire area and to insure access along existing roads and trails. Locations having two or more vegetation types in close proximity to each other were favored as a means of increasing sampling efficiency.

Each representative of a type thus selected (such as pinyon-juniper) is then surveyed on the ground and the most prevalent variants of the overall type (for example, pinyon-juniper with a sagebrush understory) are identified. The largest block of homogeneous vegetation of each variant is selected for sampling.

A modification of the line-strip technique as described by Woodin and Lindsey (1954), Lindsey (1955), and Potter (1957) is being used during the phytosociological investigations. This method incorporates the attributes of both line-strip and quadrat sampling systems to provide valid and reliable field data for each identified vegetation type.

Sixty-two, 100m x 6m transects are established within the major vegetation types occurring both on the tract and in the surrounding area. These transects are sampled during May, July, and September, 1975 and 1976. Of these 62 transects, 35 are retained as permanent transects in which only the herbaceous stratum is to be sampled again in subsequent sampling periods (Table 2.3- 1). These provide data on seasonal and annual vegetation changes for the herbaceous stratum. The remaining 27 non-permanent transects are relocated during each sampling period and are used to obtain a better statistical representation of the tree and shrub strata in each vegetation type, both on and off the tract, than would be possible using only permanent transects. The herbaceous stratum of the nonpermanent transects is not sampled, except for selected transects in the riparian and bald types.

Table 2.3-1. Numerical distribution of sampling transects (100 m x 6 m) in the major vegetation types on and adjacent to Tract C-a during each sampling period for RBOSP

Vegetation Type	No. Permanent Transects On Tract C-a	No. Permanent Transects Off Tract C-a	No. Non-permanent Transects	Total Transects Per Type
Aspen		2	1	3
Douglas Fir		2	1	3
Mixed Brush	1	4	4	9
Pinyon-Juniper	2	5	6	13
Sagebrush	2	5	6	13
Bald [1]	1	1	3	5
Shadscale	1	1	1	3
Greasewood	1	2	1	4
Rabbitbrush	1	1	2	4
Riparian		3	2	5
Subtotal	9	26	27	
			Total Transects	62

---

[1] Formerly Upland Meadow

2.3.1.2.1.1 Location and Orientation of Sampling Transects

When a representative area to be sampled is large, a randomization process is utilized to locate the starting point and orientation of transects. In this process, the analyst walks to a central area of the selected site and randomly selects a number from a 5-digit random numbers table. The first 3 digits are used to determine which compass direction to begin pacing. If the number is above 360, 360 is subtracted from that number until the remainder is 360 or below. After taking the number of paces determined by the first digit, the analyst makes a right or left turn depending on whether that digit is odd or even, respectively. The analyst then takes the number of paces dictated by the last digit to locate the starting point of the 100m x 6m transect. The transect is oriented in a compass direction given by the last three digits in the same manner discussed for selection of compass direction.

Where size of the area to be sampled is small or its topographic position does not leave enough room for this procedure (e.g., riparian, greasewood and bottomland sagebrush types), the orientation of the transect is subjectively determined in order to obtain a representative sample. In this procedure only the location of the starting point is randomized.

2.3.1.2.1.2 Data Gathering and Recording

Quantitative and qualitative phytosociological data are gathered and recorded for the tree, shrub, and herbaceous strata in each permanent transect, and for the tree and shrub strata in the non-permanent transects.

2.3.1.2.1.2.1 Tree and Shrub Strata

A taut 30m tape defining the centerline of the transect is used to determine the foliage intercept distance along the line for each of the 100m transects. The first and last numerical units of the tape which are vertically intercepted by foliage of each tree or shrub are recorded in the I_1 and I_2 columns of the data sheets shown in Figures 2.3-1, 2.3-2a and 2.3-2b. The difference between I_1 and I_2 gives the total units of foliage cover by an individual plant. A new data sheet is started for each new transect. Species are listed as they are encountered, leaving enough space between entries to allow recording of intercept data in the I_1 and I_2 columns for each. When the space between entries is filled with intercept data, a new data sheet is begun.

In addition to recording foliage intercept, a count is made of shrubs, seedlings and saplings of each species occurring within approximately 3m (9.84 ft) on either side of the tape measure. The 3m

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project______

Sheet____ of_____

Vegetation Type________________ Transect #________ Type__________

T________ R________ S________ 1/4 1/4 S________ Transect Length__________

Aspect (degrees)________ Slope (degrees)________ Elevation (feet)__________

Field Analyst(s)________________ Date__________

Site Description________________ QA Check__________

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1								
2								
3								
4								
5								

Species	Intercepts (m)								Trunk Diameter (cm) of Each Tree
	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	

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Figure 2.3-1. Mature tree stratum data sheet used for RBOSP.

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project____

Sheet____ of____

Vegetation Type____ Non-Permanent Transect #____

T____ R____ S____ 1/4 1/4 S____ Transect Length____

Aspect (degrees)____ Slope (degrees)____ Elevation (feet)____

Field Analyst(s)____ Date____

Site Description____ QA Check____

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat					Condition
			1	2	3	4	5	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Species	Intercepts (m)									
	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2

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Figure 2.3- 2a. Shrub, tree seedling stratum data sheet used for RBOSP.

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project__________

Sheet______of______

Vegetation Type______________________________ Non-Permanent Transect #________________________ Date________________

	Intercepts (m)									
Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2

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Figure 2.3-2 b. Shrub, tree seedling stratum data sheet (second page) used for RBOSP.

distance from the tape is measured with a meter stick at the start of each transect and is repeatedly measured when distances of individual shrubs or trees are in doubt. Density values for shrubs and for seedlings and saplings of tree species are determined from this census. Census data are collected and recorded by 20m (65.6 ft) segments of the transect, effectively making a series of 5 quadrats, approximately 20m x 6m (19.7 ft). This series of quadrats serves as the basis for frequency values for the shrub and tree strata.

The volumes of all shrub species are calculated for the May-June sampling period. Height, width and length measurements are averaged for each shrub intercepted in the transect to yield the diameter of a hypothetical sphere. The volume for each diameter is then calculated and all volumes are summed to produce a total volume for each species within a type. An average (mean) volume is obtained by dividing the total volume by the number of diameters. Volume (m^3) per hectare is obtained by multiplying the average (mean) volume of a species by its density per hectare.

For mature trees located in each quadrat, the diameters are recorded in centimeters. The enumeration of these recorded entries serves in determination of density in the mature tree class. Trunk diameters are recorded for trees over 7.6 cm (3 in). The trunk diameters are later converted to basal area values. Size-class distribution is also derived from the recorded measurements of trunk diameters. Tree trunk diameters are estimated to the nearest centimeter by using a meter stick. Due to the low branching habits of both pinyon and juniper, measurement is made at a height of 0.5m (1.64 ft) (Barger and Ffolliott, 1972) unless the trunk is forked below that level, in which case it is measured just below fork swell and above basal fluting. Straight-boled Douglas fir and aspen trees are measured at breast height, 1.37m (4.5 ft).

For all flowering plants (Angiospermae) a phenology code is recorded to indicate the stage of development for each species observed in a given sampling period: (1) emergent, (2) vegetative, (3) initiation of flowering, (4) flowers fully developed, (5) initiation of fruits, (6) fruits fully developed, (7) dehiscence or dispersal of seeds, (8) death or dormancy of plant.

2.3.1.2.1.2.2 Herbaceous Stratum

Herbaceous cover values are estimated within a 0.5 x 1m (1.64 x 3.28 ft) rectangular metal frame quadrat. The long axis of the quadrat is placed parallel to and on the right side of the centerline tape and centered at 10m intervals.

Each species is identified and listed (Figure 2.3- 3). Plants not identifiable to the species level are collected at a nearby location and assigned a code number corresponding to the entry on the data sheet. The ground cover of each species is estimated to the nearest 1 percent. When it is estimated that the total cover or a species cover value is less than 1 percent (e.g., one blade of grass) it is recorded by placing a "T" (trace) on the data sheet in the appropriate space. Frequency values are derived from the recorded occurrence of each species in the ten, 0.5m x 1m quadrats sampled along each transect. Density, or the number of individuals of a species occurring in each quadrat, of forb species is recorded in the column headed by "#". Density of grasses or grass-like species is not recorded.

2.3.1.2.2 Plant Collection

Plant specimens are collected to serve two objectives. The first is to obtain a voucher collection in the best possible condition of all species encountered in the study area. The second is to collect for laboratory identification any plant not identified to the species level in the field.

Plant specimens collected during each vegetation sampling period are field identified, tagged, coded for location and placed in plastic bags. This information in addition to number, date and collector is recorded in a field log book daily. All plant specimens are then routed to the laboratory where they are identified or verified to the species level. Harrington (1954) is used as the basic authority on plant identification with Weber (1972a), Hitchcock (1971) and Hermann (1970) used to obtain more recent treatments of taxonomically difficult plant groups. Weber (1972b) is utilized as the source of the most up to date nomenclature available. Plummer (1966) is used as the source of common names.

2.3.1.3 Results

Ten different vegetation types in 89 separate locations were sampled on or near Tract C-a during late May and early June, and again in late July, 1975. Sixty-two transects were established during the May-June sampling period, of which 35 were designated as permanent (Table 2.3- 1). Permanent transect locations are shown in Figure 2.3- 4 . During July, the permanent transects were resampled only for the herbaceous stratum. Shrub and tree strata were sampled on a total of 27 non-permanent transects in the ten vegetation types. A modification of the line-strip technique described by Wooden and Lindsey (1954), Lindsey (1955), and Potter (1957) was used to collect field data. Permanent and non-permanent transect data were combined for each sampling period to provide a regional view of the phytosociological characteristics common to each vegetation type.

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project________

Sheet_____ **of** _____

Vegetation Type______________________________ **Transect #**_______ **Type**__________

T________ **R**_________ **S**_________ **1/4 1/4 S**__________ **Quadrat Size**__________

Aspect (degrees)__________ **Slope (degrees)**__________ **Elevation (feet)**__________

Field Analyst(s)______________________________ **Date**__________

Site Description______________________________ **QA Check**__________

Quadrat Number

Species	Code #	Phenology Code	1		2		3		4		5		6		7		8		9		10	
			#	C	#	C	#	C	#	C	#	C	#	C	#	C	#	C	#	C	#	C

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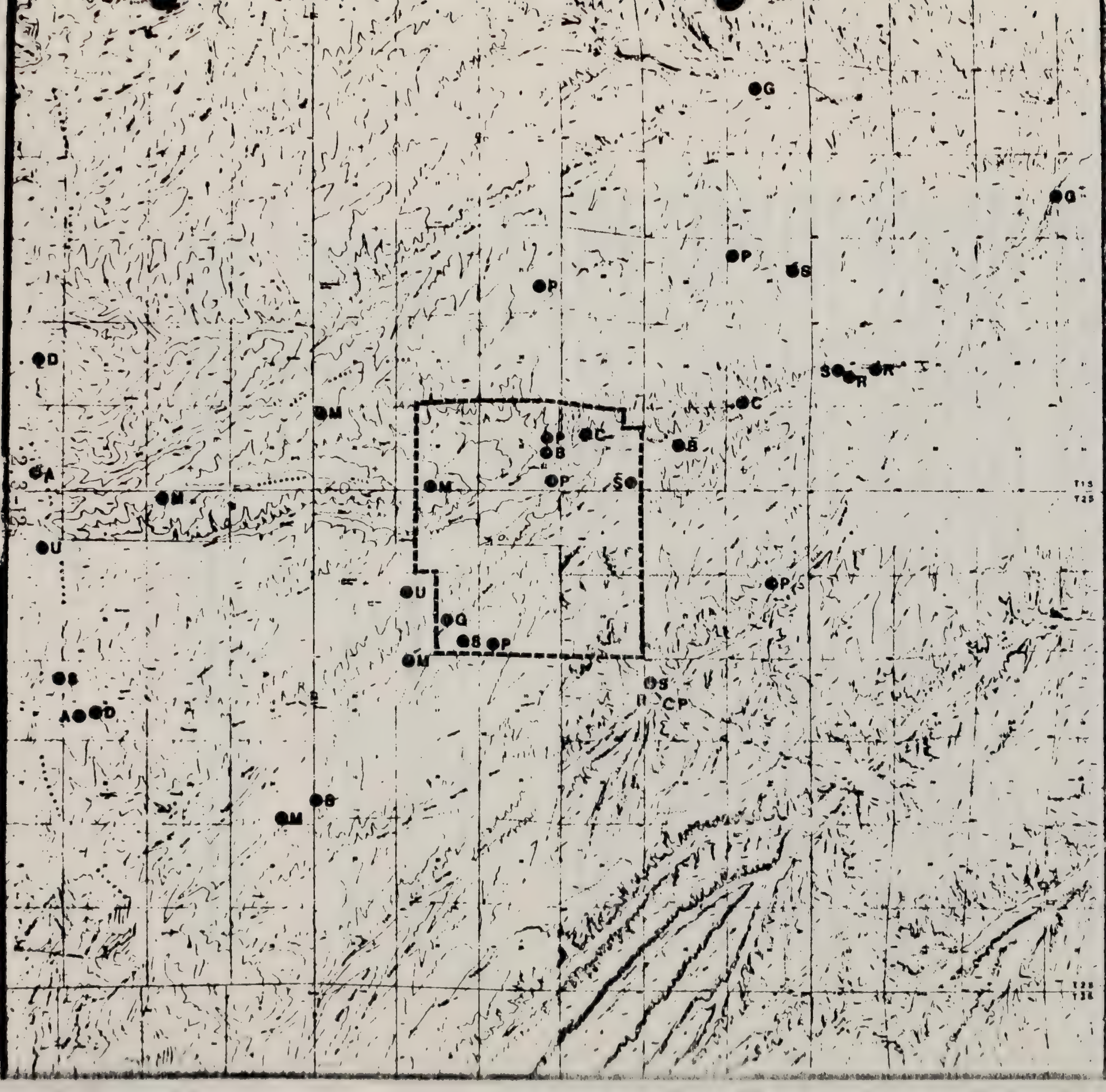
Figure 2.3- 3. Herbaceous stratum data sheet used for RBOSP.



TERRESTRIAL ECOLOGICAL INVESTIGATIONS

RIO BLANCO OIL SHALE PROJECT

VEGETATION

PERMANENT TRANSECT LOCATIONS–1975

VEGETATION TYPES

A	ASPEN
D	DOUGLAS FIR
U	BALD
M	MIXED BRUSH
P	PINYON-JUNIPER
S	SAGEBRUSH
C	SHADSCALE
B	RABBITBRUSH
G	GREASEWOOD
R	RIPARIAN

Figure 2.3-4

ECOLOGY CONSULTANTS INC.
Fort Collins, Colorado

Field data collected to date are presented at the vegetation type level in this report. For the annual report, the data will be combined for all sampling periods and analyzed to describe a series of major associations within the designated major vegetation types. Species importance and constancy values from data gathered during field sampling, in conjunction with major association criteria presented in other studies of this region will be used to develop a type and association classification or hierarchy for the study area, and a quantitative description of each major association. To the extent possible, major environmental influences such as topography, moisture gradient, and soils will be discussed in relation to the composition and distribution of the associations identified.

A series of tables was prepared to describe basic elements in the structure and composition of the plant communities encountered in the study area during the October 1974, May-June 1975, and July 1975 sampling periods. Tables are organized by vegetation types, life form categories (tree, shrub, herbaceous) within each type, and by sampling period. This system permits rapid comparisons among sampling periods, and among the different strata within a type.

The species order in the tables is determined by the cover values calculated for each species and these are ranked from highest to lowest. If cover values are the same for two species, then their arrangement in the tables is determined by frequency values from highest to lowest. If cover and frequency values are the same, arrangement is determined by density values from highest to lowest. If the above three values are the same or if density values are not available, the arrangement is determined by alphabetical order.

The following is a summary of the analytical and synthetic concepts presented in the tables. Each concept is followed by a brief definition. Some concepts are relevant to all strata, others to only one stratum.

Concepts used in all strata:

1. Cover - the average percent canopy cover of a species.

2. Frequency - the percentage of quadrats that include a species within the type.

3. Cover in m^2/ha - conversion of percent cover values to square meters per hectare.

Concepts used in herbaceous stratum only:

1. Density in #/quadrat - the average number of individuals of a species occurring in each quadrat sampled. This parameter was measured for forb species only.

2. Sociability - density in #/quadrat divided by frequency. Sociability is an index of the tendency for individuals of a species to be aggregated and/or dispersed in their distribution.

Concepts used in both herbaceous and shrub strata:

1. Importance value - the sum of cover and frequency values for a species.

2. Constancy - the percentage of occurrence of a species in the transects sampled for a type, multiplied by 100. A measure of the ubiquity of a species among a series of stands of a given vegetation type.

Concepts used only in the shrub stratum:

1. Mean intercept in meters - the average intercept value of a species within a type.

2. Mean volume in m^3 - an estimation of the average volume in cubic meters occupied by an individual plant of a species within a type.

3. Volume in m^3/ha - an estimation of the total volume of a species per hectare obtained by multiplying the mean volume of a species by its average density per hectare.

Concept used in both shrub and tree strata:

1. Density in #/ha - numbers of individual shrubs or trees per hectare. Shrub and tree density figures in the text are derived from density per hectare data in the tables. Shrub density in the text is expressed in number per square meter, or number per hectare x 10^{-4}. Tree density is expressed in number per $10m^2$, or number per hectare x 10^{-3}.

Concept used only in tree stratum:

1. Basal area per hectare - the total basal area recorded per species divided by the total area sampled.

In the Results section, the major parameters measured for each vegetation type during the summer quarter are summarized. The Summary section provides comparisons between the summer quarter data and data collected during October 1974 sampling.

For the summer quarter data, the Results section summarizes the following for each type; the extent of sampling, number of strata sampled in each vegetation type, number of species in each stratum, total cover for each stratum, dominant species in each stratum and their relative cover, stand density for trees and shrubs, shrub and tree species contributing the greatest density, shrub volume and size

class relationships of tree species. In the herbaceous stratum, similarities in species occurrence between sampling periods, and relative cover of grasses and forbs are presented to document changes in phenology and composition over time. Percent cover is used as the criterion for identifying dominant species. Importance values, combining cover and frequency values, are also provided in the tables to indicate an alternative way to rank species. Table percentages are rounded to the nearest whole number where presented in the text of the Results section.

A species list has been assembled listing all species in four categories by life form (tree, shrub, herbaceous non-grasslike, and grass and grasslike). The species are listed in alphabetical order with the appropriate author citation, family, life form, and common name. Whether the species is introduced or native and whether a voucher specimen has been collected for that species is also indicated. This list is included in Table 2.3-2.

2.3.1.3.1 Aspen

During the summer quarter, the aspen type was sampled with 2 permanent and 2 non-permanent transects. Shrub and tree strata were measured on all transects. Twenty 0.5 m^2 quadrats were used to sample the herbaceous stratum on the 2 permanent transects. Each quadrat was sampled in June, and again in July. Three strata and 37 species were identified for the aspen type: 2 species in the tree stratum; 12 species in the shrub stratum; and 27 species in the herbaceous layer. Populus tremuloides and Pseudotsuga menziesii occurred in both the tree and shrub strata.

2.3.1.3.1.1 Herbaceous Stratum (Table 2.3-3)

Fourteen species contributed a total cover of 4 percent during the May-June sampling period. This low value reflects the delayed emergence of the vegetation due to the retarded growing season at this high altitude. The dominant species was a sedge Carex geyeri, with a relative cover of 73 percent. Grasses and sedges contributed 85 percent of the total cover. Species encountered were primarily perennials, with very few spring ephemerals.

During July, 25 species contributed a total cover of 42 percent. Dominance was shared by Viola rugulosa, Thermopsis montana, and Osmorhiza depauperata, together contributing a relative cover of 41 percent. Grasses and sedges contributed only 20 percent of the total cover, reflecting the great increase in forb species cover between early June and late July.

2.3.1.3.1.2 Shrub Stratum (Table 2.3-4)

Ten species contributed a total cover of 69 percent during the May-June sampling period, and eight species provided 114 percent cover in the stand sampled in July. Amelanchier alnifolia was the dominant species on the transects sampled during both sampling periods,

Table 2.3-2. Species of plants observed to date in the vicinity of Tract C-a for RBOSP*

Abbrev.	Species
	TREES
Juos[1]	Juniperus osteosperma (Torr.) Little;[2] (Pinaceae),[3] Phan,[4] Utah juniper, (V) 5/
Pied	Pinus edulis Engelm.; (Pinaceae), Phan, pinyon pine
Poan	Populus angustifolia James; (Salicaceae), Phan, narrowleaf cottonwood, (V)
Potr	Populus tremuloides Michx.; (Salicaceae), Phan, quaking aspen
Psme	Pseudotsuga menziesii (Mirbel) Franco; (Pinaceae), Phan, Douglas fir
	SHRUBS
Acgl	Acer glabrum Torr.; (Aceraceae), Phan, Rocky Mountain maple, (V)
AMELA	Amelanchier sp.
Amal	Amelanchier alnifolia Nutt.; (Rosaceae), Phan, Saskatoon serviceberry, (V)
Amut	Amelanchier utahensis Koehne; (Rosaceae), Phan, Utah serviceberry, (V)
Arfr	Artemisia frigida Willd.; (Compositae), Cham, fringed sagebrush, (V)
Artr	Artemisia tridentata Nutt.; (Compositae), Phan, Cham, big sagebrush, (V)
Atca	Atriplex canescens (Pursh) Nutt.; (Chenopodiaceae) Cham, fourwing saltbush, (V)
Atco	Atriplex confertifolia (Torr. & Fremont) S. Wats.; (Chenopodiaceae), Cham, shadscale, (V)

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*Key to footnotes appears at the end of the species list.

Table 2.3-2. (Continued)

Abbrev.	Species
	SHRUBS (Cont.)
	Berberis repens; See Mahonia repens
Befo	Betula fontinalis Sarg.; (Betulaceae), Phan, water birch (V)
	Betula occidentalis; See Betula fontinalis
Cema	Ceanothus martini M.E. Jones; (Rhamnaceae), Cham, Martin ceanothus, (V)
Cemo	Cercocarpus montanus Raf.; (Rosaceae), Phan, true mountain mahogany, (V)
CHRYS	Chrysothamnus sp.
Chde	Chrysothamnus depressus Nutt.; (Compisitae), Cham, dwarf rabbitbrush
Chna	Chrysothamnus nauseosus (Pall.) Britt. in Britt. & Brown; (Compositae), Phan, rubber rabbitbrush, (V)
Chvi	Chrysothamnus vicidiflorus (Hook.) Nutt.; (Compositae), Cham, Douglas rabbitbrush, (V)
	Cornus stolonifera; See Swida sericea
Epvi	Ephedra viridis Coville; (Ephedraceae), Cham, green ephedra
Eula	Eurotia lanata (Pursh) Moquin; (Chenopodiaceae), Cham, common winterfat, (V)
Gusa	Gutierrezia sarothrae (Pursh) Britt. & Rusby; (Compositae), Cham, broom snakeweed
Hodu	Holodiscus dumosus (Nutt.) Heller; (Rosaceae), Cham, bush ocean-spray, (V)
Mare	Mahonia repens (Lindl.) G. Don; (Berberidaceae), Cham, creeping barberry, (V)
Opfr	Opuntia fragilis (Nutt.) Haw.; (Cactaceae), Succ, brittle pricklypear

Table 2.3-2. (Continued)

Abbrev.	Species
	SHRUBS (Cont.)
Oppo	*Opuntia polyacantha* Haw.; (Cactaceae), Succ, plains pricklypear
Pamy	*Pachystima myrsinites* (Pursh) Raf.; (Celastraceae), Cham, myrtle pachystima (V)
Puvim	*Prunus virginiana* var. *melanocarpa* (A. Nels.) Sarg.; (Rosaceae), Phan, black common chokecherry
Putr	*Purshia tridentata* (Pursh) D.C.; (Rosaceae), Cham, antelope bitterbrush, (V)
Quga	*Quercus gambelii* Nutt.; (Fagaceae), Phan, Gambel oak, (V)
RIBES	*Ribes* sp.
Riau	*Ribes aureum* Pursh; (Saxifragaceae), Cham, golden current, (V)
Rice	*Ribes cereum* Dougl.; (Saxifragaceae), Cham, wax current, (V)
Riin	*Ribes inerme* Rydb.; (Saxifragaceae), Cham, whitestem gooseberry, (V)
ROSA	*Rosa* sp.
Rowo	*Rosa woodsii* Lindl.; (Rosaceae), Cham, Wood's rose
Saex	*Salix exigua* Nutt.; (Salicaceae), Cham, willow, (V)
Sain	*Salix interior* Rowlee; (Salicaceae), Cham, willow, (V)
Saco	*Sambucus coerulea* Raf.; (Caprifoliaceae), Cham, blueberry elder, (V)
Save	*Sarcobatus vermiculatus* (Hook.) Torr.; (Chenopodiaceae), Cham, black greasewood, (V)
Sosc	*Sorbus scopulina* Greene; (Rosaceae), Cham, Greenes mountain-ash, (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	SHRUBS (Cont.)
Swse	Swida sericea (L.) Holub; (Cornaceae), Cham, redosier dogwood, (V)
Syor	Symphoricarpos oreophilus A. Gray; (Caprifoliaceae), Cham, mountain snowberry (V)
Teca	Tetradymia canescens D.C.; (Compositae), Cham, gray horsebrush, (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE)
Acla	*Achillea lanulosa* Nutt.; (Compositae) Hemi, western yarrow, (N)6/ (V)
Agur	*Agastache urticifolia* Kuntze; (Labiatae), Hemi, nettleleaf giant-hyssop, (N) (V)
AGOSE	*Agoseris* sp.
Agau	*Agoseris aurantiaca* (Hook.) Greene; (Compositae) Hemi, orange agoseris, (N) (V)
Aggl	*Agoseris glauca* (Pursh) Raf.; (Compositae), Hemi, pale agoseris, (N) (V)
Alte 2	*Allium textile* Nels. & Macbr.; (Liliaceae), Cryp, textile onion, (N) (V)
AMBRO	*Ambrosia* sp. (L.); (Compositae) Ther, ragweed, (N)
Anse	*Androsace septentrionalis* L.; (Primulaceae), Ther, rock-jasmine, (N) (V)
ANGEL	*Angelica* sp.
Anam	*Angelica ampla* A. Nels; (Umbelliferae), Hemi, Angelica, (N) (V)
Anpi	*Angelica pinnata* S. Wats; (Umbelliferae), Hemi, small-leaf angelica, (N) (V)
ANTEN	*Antennaria* sp.
Anmi	*Antennaria microphylla* Rydb.; (Compositae), dioecious, Hemi, pussytoes, (N) (V)
Anpu	*Antennaria pulcherrima* (Hook.) Greene; (Compositae), dioecious, Hemi, showy pussytoes, (N) (V)
Anro	*Antennaria rosea* Greene; (Compositae), dioecious, Hemi, rose pussytoes (N) (V)
Aqba	*Aquilegia barnebyi* Munz; (Ranunculaceae), Hemi, columbine, (Rare--endemic to Green River shale deposits), (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Aqca	Aquilegia caerulea James; (Ranunculaceae), Hemi, Colorado columbine, (Protected by Colorado State Law) (N) (V)
ARABI	Arabis sp.
Ardi 3	Arabis divaricarpa A. Nels.; (Cruciferae), Hemi, rockcress, (N) (V)
Ardr	Arabis drummondi A. Gray; (Cruciferae), Hemi, Drummond rockcress, (N) (V)
Arfe 4	Arabis fendleri (Wats.) Greene; (Cruciferae), Hemi Fendler rockcress, (N) (V)
Arfes	Arabis fendler var. spatifolia (Rydb.) Rollins; (Cruciferae), Hemi, rockcress, (N) (V)
ARENA	Arenaria sp.
Area	Arenaria eastwoodiae Rydb.; (Caryophyllaceae), Hemi, Sandwort, (N) (V)
Arfe	Arenaria fendleri A. Gray; (Caryophyllaceae), Hemi, Fendler Sandwort, (N) (V)
ARTEM	Artemisia sp.
Ardr	Artemisia dracunculus L.; (Compositae), Hemi, Tarragon, (N) (V)
Arlu	Artemisia ludoviciana Nutt.; (Compositae), Hemi, Louisiana sagebrush, (N) (V)
Ascr	Asclepias cryptoceras S. Wats.; (Asclepidaceae), Hemi, milkweed, (N) (V)
ASTER	Aster sp.
Asar 6	Aster arenosus Blake; (Compositae), Hemi, aster, (N) (V)
ASTRA	Astragalus sp.
Asch	Astragalus chamaeleuce A. Gray; (Leguminosae), Hemi, milkvetch, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Asdi	*Astragalus diversifolius* A. Gray; (Leguminosae), Hemi, milkvetch, (N) (V)
Aslu	*Astragalus lutosus* M.E. Jones; (Leguminosae), Hemi, milkvetch, (threatened and endangered--endemic to Green River shale deposits), (N) (V)
Aspu	*Astragalus purshii* Dougl. ex. Hook; (Leguminosae), Hemi, Pursh locoweed, (N) (V)
Assp 3	*Astragalus spatulatus* Sheld.; (Leguminosae), Hemi, tufted milkvetch, (N) (V)
Aste 3	*Astragalus tenellus* Pursh; (Leguminosae), Hemi, loose flower milkvetch, (N) (V)
Basa	*Balsamorhiza sagittata* (Pursh) Nutt.; (Compositae), Hemi, arrowleaf balsam root, (N) (V)
BORAG	*Boraginaceae*
CALOC	*Calochortus* sp.
Canu	*Calochortus nuttallii* Torr.; (Liliaceae), Cryp, segolily mariposa, (N) (V)
Cagu	*Calochortus gunnisonii* S. Wats.; (Liliaceae), Cryp, (N)
Cabu	*Capsella bursa-pastoris* (L.) Medic.; (Cruciferae), Ther, shepherds-purse, (I)
Cach 3	*Castilleja chromosa* A. Nels.; (Scropholariaceae), Hemi, Indian paintbrush, (N) (V)
Cali	*Castilleja linariaefolia* Benthin D.C.; (Scrophulariaceae), Hemi, Wyoming painted cup (N) (V)
CHAEN	*Chaenactis* sp.
Chdo	*Chaenactis douglasii* (Hook) Hook & Arn.; (Compositae), Hemi, Douglas chaenactis, (N) (V)
CHENO	*Chenopodium* sp.

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Chal	*Chenopodium album* L.; (Chenopodiaceae), Ther, Lambsquarter goosefoot, (I) (V)
Chfr 2	*Chenopodium fremontii* S. Wats.; (Chenopodiaceae), Ther, Fremont goosefoot, (N) (V)
	Chenopodium gigantospermum; See *Chenopodium hybridum*
Chgi	*Chenopodium hybridum* (L.): (Chenopodiaceae), Ther, mapleleaf goosefoot, (origin uncertain), (V)
Chle	*Chenopodium leptophyllum* Nutt.; (Chenopodiaceae), Ther, slimleaf goosefoot, (N) (V)
Chte	*Chorispora tenella* D.C.; (Cruciferae), Ther, chorispora, (I) (V)
CIRSI	*Cirsium* sp.
Ciar 2	*Cirsium arvense* (L.) Scop.; (Compositae), Hemi, Canada thistle, (I) (V)
	Cirsium lanceolatum; See *Cirsium vulgare*
Ciun	*Cirsium undulatum* (Nutt.) Spreng.; (Compositae), Hemi, wavyleaf thistle, (N) (V)
Civu	*Cirsium vulgare* (Savi) Tenore; (Compositae), Hemi, bull thistle, (I) (V)
Clco	*Clematis columbiana* (Nutt.) T.& G.; (Ranuncularceae), Hemi, (N).
Clhi	*Clematis hirsutissima* Pursh; (Ranunculaceae), Hemi, Douglas clematic, (N) (V)
Clps	*Clematis pseudoalpina* (Kuntze) A. Nels. in Coult. & Nels; (Ranunculaceae), Hemi, (N) (V)
Copa 2	*Collinsia parviflora* Dougl. in Lindl.; (Scrophulariaceae), Ther, little flower collinsia, (N) (V)
Coll	*Collomia linearis* Nutt.; (Polemoniaceae), Ther, slenderleaf collomia, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Copa	Comandra umbellata ssp. pallida (A. DC.) Piehl; (Santalaceae), Hemi, bastard toadflax, (N) (V)
COMPO	Compositae
Coau	Corydalis aurea Willd.; (Fumariaceae), Ther, golden corydalis, (N) (V)
CREPI	Crepis sp.
Crac	Crepis acuminata Nutt.; (Compositae), Hemi, tapertip hawksbeard, (N) (V)
Croc	Crepis occidentalis Nutt.; (Compisitae), Hemi, western hawksbeard, (N) (V)
CRUCI	Cruciferae
CRYPT	Cryptantha sp.
Crse	Cryptantha sericea (A. Gray) Payson; (Boraginaceae), Hemi, (N) (V)
CYMOP	Cymopterus sp.
Cyac	Cymopterus acaulis (Pursh) Raf.; (Umbellifereae), Cryp, (N) (V)
Cyfe	Cymopterus fendleri A. Gray; (Umbellifereae), Cryp, Chimaya, (N) (V)
DELPH	Delphinium sp.
Dene	Delphinium nelsonii Greene; (Ranunculaceae), Hemi, Menzies larkspur, (N) (V)
DESCU	Descurainia sp.
Depi	Descurainia pinnata (Walt.) Britt; (Cruciferae), Ther, pinnate tanseymustard, (N)
Deri	Descurainia richardsonii (Sweet) O.E. Schulz; (Cruciferae), Ther, Richardson tanseymustard, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Epad	*Epilobium adenocaulon* Hausskn.; (Onograceae), Hemi, sticky willowweed, (N) (V)
EQUIS	*Equisetum* sp.
Eqla	*Equisetum laevigatum* A. Br.; (Equisetaceae), Cryp, smooth horsetail, (N) (V)
ERIGE	*Erigeron* sp.
Erea	*Erigeron eatonii* A. Gray; (Compositae), Hemi, Eaton fleabane, (N) (V)
Erpu 2	*Erigeron pumilus* Nutt.; (Compositae), Hemi, low fleabane, (N) (V)
Ersp	*Erigeron speciosus* (Lindl.) DC.; (Compositae), Hemi, Oregon fleabane
ERIOG	*Eriogonum* sp.
Eral	*Eriogonum alatum* Torr.; (Polygonaceae), Hemi, wing eriogonum, (N) (V)
Ervi	*Eriogonum densum* Greene; (Polygonaceae), Hemi, broom eriogonum, (N) (V)
Erlo	*Eriogonum lonchophyllum* T. & G.; (Polygonaceae), Hemi, eriogonum, (N) (V)
Erov	*Eriogonum ovalifolium* Nutt.; (Polygonaceae), Hemi, cushion eriogonum, (N) (V)
Erum	*Eriogonum umbellatum* Nutt.; (Polygonaceae), Hemi, sulfur eriogonum, (N) (V)
Erar 6	*Erysimum asperum* (Nutt.) DC.; (Polygonaceae), Hemi, plains erysimum, (N) (V)
EUPHO	*Euphorbia* sp.
Eufe	*Euphorbia fendleri* T. & G.; (Euphorbiaceae), Hemi, Fendler euphorbia, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Euro	*Euphorbia robusta* (Engelm.) Small; (Euphorbiaceae), Hemi, robust euphorbia, (N) (V)
FRAGA	*Fragaria* sp.
Frsp	*Frasera speciosa* Douglas; (Gentianaceae), Hemi, showy frasera, (N) (V)
Frat	*Fritillaria atropurpurea* Nutt.; (Liliaceae), Cryp, purplespot fritillaria, (N) (V)
Gabo	*Galium boreale* L.; (Rubiaceae), Hemi, northern bedstraw, (N) (V)
Geri	*Geranium richardsonii* Fisch. & Trautv.; (Geraniaceae), Hemi, Richardson geranium, (N) (V)
	Gilia spp.; See *Ipomopsis* spp.
Hafl	*Hackelia floribunda* (Lehm.) Johnston; (Boraginaceae), Hemi, stickseed, (N) (V)
HAPLO	*Haplopappus* sp.
Haac	*Haplopappus acaulis* (Nutt.) A. Gray; (Compositae), Hemi, stemless goldenweed, (N) (V)
Hanu	*Haplopappus nuttallii* T. & G.; (Compositae), Hemi, goldenweed, (N) (V)
HEDYS	*Hedysarum* sp.
Hebo	*Hedysarum boreale* Nutt.; (Leguminosae), Hemi, northern sweetvetch, (N) (V)
Heun	*Helianthella uniflora* (Nutt.) T.& G.; (Compositae), Hemi, oneflower helianthella, (N) (V)
Hela	*Heracleum lanatum* Michx.; (Umbellifereae) Hemi, common cowparsnip, (N) (V)
Hepa	*Heuchera parviflora* Nutt. ex. T. & G.; (Saxifragaceae), Hemi, littleleaf alumroot, (N) (V)

Table 2.3- 2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Hyfi	*Hymenopappus filifolius* Hook.; (Compositae), Hemi, fineleaf hymenopappus, (N) (V)
HYMEN	*Hymenoxys* sp.
Hyac	*Hymenoxys acaulis* (Pursh) Parker; (Compositae), Hemi, stemless hymenoxys, (N) (V)
Ipag	*Ipomopsis aggregata* (Pursh) V. Grant; (Polemoniaceae), Hemi, skyrocket gilia, (N) (V)
Ipco	*Ipomopsis congesta* (Hook.) V. Grant; (Polemoniaceae), Hemi, ballhead gilia, (N) (V)
KOCHI	*Kochia* sp.
Koir	*Kochia iranica* Bornm.; (Chenopodiaceae), Ther, summer cypress, (I)
	Kochia scoparia; See *Kochia iranica*
LACTU	*Lactuca* sp.
Lase	*Lactuca serriola* L.; (Compositae), Ther, prickly lettuce, (I)
LAPPU	*Lappula* sp.
Lare	*Lappula redowskii* (Hornem.) Greene; (Boraginaceae), Ther, annual stickseed, (N) (V)
LEPID	*Lepidium* sp.
Lemo	*Lepidium montanum* Nutt.; (Cruciferae), Hemi, pepperweed, (N) (V)
Lepe	*Lepidium perfoliatum* L.; (Cruciferae), Ther, clasping pepperweed, (I) (V)
Lepu	*Leptodactylon pungens* (Torr.) Rydb.; (Polemoniaceae), Hemi, (N) (V)
Lipo	*Ligusticum porteri* C. & R.; (Umbellifereae), Hemi, Porter ligusticum, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Liki	*Linum kingii* Wats. in King; (Linaceae), Hemi, flax, (N) (V)
Lile	*Linum lewisii* Pursh; (Linaceae), Hemi, Lewis flax, (N) (V)
LITHO	*Lithospermum* sp.
Liin	*Lithospermum incisum* Lehm.; (Boraginaceae), Hemi, gromwell, (N) (V)
Liru	*Lithospermum ruderale* Dougl. in Lehm.; (Boraginaceae), Hemi, (N) (V)
LOMAT	*Lomatium* sp.
Logr	*Lomatium grayi* C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
Loju	*Lomatium juniperinum* (M.E. Jones) C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
Loor	*Lomatium orientale* C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
LUPIN	*Lupinus* sp.
Luar	*Lupinus argenteus* Pursh; (Leguminosae), Hemi, silvery lupine, (N) (V)
Luca	*Lupinus caudatus* Kellogg; (Leguminosae), Hemi, tailcup lupine, (N) (V)
Lyju	*Lygodesmia juncea* (Pursh) D. Don.; Hemi, rush skeletonplant, (N) (V)
MALVA	*Malva* sp.; (Malvaceae), Hemi, mallow (N)
Mear	*Mentha arvense* L.; (Labiateae), Hemi, field mint, (N) (V)
MENTZ	*Mentzelia* sp.
Meal 2	*Mentzelia albicaulis* Dougl. ex Hook.; (Loasaceae), Ther, whitestem mentzelia, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Liki	Linum kingii Wats. in King; (Linaceae), Hemi, flax, (N) (V)
Lile	Linum lewisii Pursh; (Linaceae), Hemi, Lewis flax, (N) (V)
LITHO	Lithospermum sp.
Liin	Lithospermum incisum Lehm.; (Boraginaceae), Hemi, gromwell, (N) (V)
Liru	Lithospermum ruderale Dougl. in Lehm.; (Boraginaceae), Hemi, (N) (V)
LOMAT	Lomatium sp.
Logr	Lomatium grayi C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
Loju	Lomatium juniperinum (M.E. Jones) C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
Loor	Lomatium orientale C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
LUPIN	Lupinus sp.
Luar	Lupinus argenteus Pursh; (Leguminosae), Hemi, silvery lupine, (N) (V)
Luca	Lupinus caudatus Kellogg; (Leguminosae), Hemi, tailcup lupine, (N) (V)
Lyju	Lygodesmia juncea (Pursh) D. Don.; Hemi, rush skeletonplant, (N) (V)
MALVA	Malva sp.; (Malvaceae), Hemi, mallow (N)
Mear	Mentha arvense L.; (Labiateae), Hemi, field mint, (N) (V)
MENTZ	Mentzelia sp.
Meal 2	Mentzelia albicaulis Dougl. ex Hook.; (Loasaceae), Ther, whitestem mentzelia, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Liki	*Linum kingii* Wats. in King; (Linaceae), Hemi, flax, (N) (V)
Lile	*Linum lewisii* Pursh; (Linaceae), Hemi, Lewis flax, (N) (V)
LITHO	*Lithospermum* sp.
Liin	*Lithospermum incisum* Lehm.; (Boraginaceae), Hemi, gromwell, (N) (V)
Liru	*Lithospermum ruderale* Dougl. in Lehm.; (Boraginaceae), Hemi, (N) (V)
LOMAT	*Lomatium* sp.
Logr	*Lomatium grayi* C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
Loju	*Lomatium juniperinum* (M.E. Jones) C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
Loor	*Lomatium orientale* C. & R.; (Umbellifereae), Cryp, desert parsley, (N) (V)
LUPIN	*Lupinus* sp.
Luar	*Lupinus argenteus* Pursh; (Leguminosae), Hemi, silvery lupine, (N) (V)
Luca	*Lupinus caudatus* Kellogg; (Leguminosae), Hemi, tailcup lupine, (N) (V)
Lyju	*Lygodesmia juncea* (Pursh) D. Don.; Hemi, rush skeletonplant, (N) (V)
MALVA	*Malva* sp.; (Malvaceae), Hemi, mallow (N)
Mear	*Mentha arvense* L.; (Labiateae), Hemi, field mint, (N) (V)
MENTZ	*Mentzelia* sp.
Meal 2	*Mentzelia albicaulis* Dougl. ex Hook.; (Loasaceae), Ther, whitestem mentzelia, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Memu	*Mentzelia multiflora* (Nutt.) Gray; (Loasaceae), Hemi, desert mentzelia, (N) (V)
MERTE	*Mertensia* sp.
Meci	*Mertensia ciliata* (James) G. Don; (Boraginaceae), Hemi, mountain bluebells, (N) (V)
Mopa	*Moldavica parviflora* (Nutt.) Britton; (Labiateae), Ther, American dragonhead, (N) (V)
MOSS	Moss
Oeca	*Oenothera caespitosa* Nutt.; (Onograceae), Hemi, tufted evening-primrose, (N) (V)
Oeco	*Oenothera coronopifolia* T. & G.; (Onograceae), Hemi, evening primrose, (N) (V)
Oela	*Oenothera lavandulaefolia* T. & G.; (Onograceae), Hemi, lavanderleaf evening-primrose, (N) (V)
OSMOR	*Osmorhiza* sp.
Osde	*Osmorhiza depauperata* Phil.; (Umbellifereae), Hemi, sweetroot, (N) (V)
Oxla	*Oxytropis lambertii* var. *bigelovii* A. Gray; (Leguminosae), Hemi, Lambert crazyweed, (N) (V)
PENST	*Penstemon* sp.
Peca	*Penstemon caespitosus* Nutt. ex A. Gray; (Scrophulariaceae), Hemi, mat penstemon, (N) (V)
Pefr	*Penstemon fremontii* T. & G.; (Scrophulariaceae), Hemi, beardtongue, (N) (V)
Peos	*Penstemon osterhoutii* Pennell; (Scrophulariaceae), Hemi, beardtongue, (N) (V)
Pest	*Penstemon strictus* Benth. in DC.; (Scrophulariaceae), Hemi, Rocky Mountain penstemon, (N) (V)
Phse	*Phacelia sericea* (Graham) A. Gray; (Hydrophyllaceae), Hemi, silky phacelia, (N) (V)
PHLOX	*Phlox* sp.

Table 2.3- 2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Phho	*Phlox hoodii* Rich.; (Polemoniaceae), Hemi, Hoods phlox, (N) (V)
Phlo	*Phlox longifolia* Nutt.; (Polemoniaceae), Hemi, longleaf phlox, (N) (V)
Phmu	*Phlox multiflora* A. Nels.; (Polemoniaceae), Hemi, flowery phlox, (N) (V)
Phfl	*Physaria floribunda* Rydb.; (Cruciferae), Hemi, twinpod, (N) (V)
PLANT	*Plantago* sp.; (Plantaginaceae), Ther, plantain, (N)
Posa 3	*Polygonum sawatchense* Small; (Polygonaceae), Ther, knotweed, (N) (V)
POTEN	*Potentilla* sp.
Pomo	*Potentilla monspeliensis* L.; (Rosaceae), Ther, cinquefoil, (origin uncertain) (V)
Popu	*Potentilla pulcherrima* Lehm.; (Rosaceae), Hemi, cinquefoil, (N) (V)
Poqu	*Potentilla quinquifolia* Rydb.; (Rosaceae), Hemi, cinquefoil, (N) (V)
Pyas	*Pyrola asarifolia* Michx.; (Ericaceae), Hemi, alpine pyrola, (N) (V)
RANUN	*Ranunculus* sp.
Racy	*Ranunculus cymbalaria* var. *saximontanus* Fernald; (Ranunculaceae), Hemi, Rocky Mountain buttercup, (N) (V)
Rasc 2	*Ranunculus sceleratus* L.; (Ranunculaceae), Hemi, blister buttercup, (I) (V)
RORIP	*Rorippa* sp.
Rona	*Rorippa nasturtium-aquaticum* (L.) Schinz & Thell.; (Cruciferae), Hemi, watercress, (I) (V)
Rucr	*Rumex crispus* L.; (Polygonaceae), Hemi, curlydock (N) (V)

Table 2.3- 2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
Ruut	*Rumex utahensis* Rech. f.; (Polygonaceae), Hemi, dock, (N) (V)
Saka	*Salsola kali* L.; (Chenopodiaceae), Ther, Russianthistle, (I) (V)
Scla	*Scrophularia lanceolata* Pursh, (Scrophulariaceae), Hemi, lanceleaf figwort, (N) (V)
SENEC	*Senecio* sp.
Sein	*Senecio integerrimus* Nutt.; (Compositae), Hemi, lambstongue groundsel, (N) (V)
Semu 2	*Senecio mutilobatus* T. &. G. ex A. Gray; (Compositae), Hemi, lobeleaf groundsel, (N) (V)
SISYM	*Sisymbrium* sp.
Sial	*Sisymbrium altissimum* L.; (Cruciferae), Ther, tumblemustard, (I) (V)
Sili	*Sisymbrium linifolium* Nutt. in T. & G.; (Cruciferae), Hemi, tumblemustard, (N) (V)
SMILA	*Smilacina* sp.
Smra	*Smilacina racemosa* var. *amplexicaulis* (Nutt.) S. Wats.; (Liliaceae), Cryp, Solomon-plume, (N) (V)
Smst	*Smilacina stellata* (L.) Desf.; (Liliaceae), Cryp, Solomon-plume, (N) (V)
SOLID	*Solidago* sp.; (Compositae), Hemi, goldenrod, (N) (V)
SPHAE	*Sphaeralcea* sp.
Spco	*Sphaeralcea coccinea* (Pursh) Rydb.; (Malvaceae), Hemi, scarlet globemallow, (N) (V)
Stpi 2	*Stanleya pinnata* (Pursh) Britton; (Cruciferae), Hemi, desert princesplume, (N) (V)
Stco 3	*Streptanthus cordatus* Nutt. ex T. & G.; (Cruciferae), Hemi, heartleaf twistflower, (N) (V)

Table 2.3- 2. (Continued)

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE) (Cont.)
TARAX	*Taraxacum* sp.
Taof	*Taraxacum officinale* Web. in Wiggers; (Compositae), Hemi, common dandelion, (distribution worldwide) (V)
Thfe	*Thalictrum fendleri* Engelm. ex A. Gray; (Ranunculaceae), Hemi, Fendler meadowrue, (N) (V)
Thmo	*Thermopsis montana* Nutt. ex T. & G.; (Leguminoseae), Hemi, mountain thermopsis, (N) (V)
Toin	*Townsendia incana* Nutt.; (Compositae), Hemi, hoary townsendia, (N) (V)
TRIFO	*Trifolium* sp.
Trgy	*Trifolium gymnocarpon* Nutt.; (Leguminoseae), Hemi, hollyleaf clover, (N) (V)
UMBEL	Umbelliferae
Urdig	*Urtica dioica* ssp. *gracilis* (A.T.) Selander; (Labiateae), Hemi or Ther, big stinging nettle, (N)
Vaoc	*Valeriana occidentalis* Heller; (Valerianaceae), Hemi, western valerian, (N) (V)
Viam	*Vicia americana* Muehl. ex Willd.; (Leguminoseae), Hemi, American vetch, (N) (V)
Viad	*Viola adunca* Smith; (Violaceae), Hemi, Hook violet, (N) (V)
Vicar	*Viola canadensis* L. var. *rugulosa* (Greene) C.L. Hitchcock; (Violaceae), Hemi, Canada violet, (N) (V)
Vinu	*Viola nuttallii* Pursh; (Violaceae), Hemi, Nuttall violet, (N) (V)
Vipa 2	*Viola pallens* (Banks) Brainerd; (Violaceae), Hemi, marsh violet, (N) (V)
	Viola palustris ssp. *brevipes*; See *Viola pallens*

Abbrev.	Species
	HERBACEOUS (NON-GRASSLIKE (Cont.)
	Viola rugulosa; See Viola canadensis var. rugulosa
Zyveg	Zygadenus venenosus var. gramineus (Rydb.) Walsh ex M.E. Peck; (Liliaceae), Cryp, grassy deathcamas, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	GRASSES AND GRASS-LIKES
AGROP	*Agropyron* sp.
	Agropyron cristatum; See *Agropyron desertorum*
Agde 2	*Agropyron desertorum* (Risch.) Schult.; (Gramineae), Hemi, crested wheatgrass, (I) (N)
	Agropyron inerme; See *Agropyron spicatum* var. *inerme*
Agre 2	*Agropyron repens* (L.) Beauv.; (Gramineae), Hemi, quack-grass, (I) (V)
Agsm	*Agropyron smithii* Rydb.; (Gramineae), Bluestem wheatgrass, (N) (V)
Agspi	*Agropyron spicatum* (Pursh) Scribn. & Smith var. *inerme* Heller; (Gramineae), Hemi, beardless bluebunch wheatgrass, (N) (V)
Agsp	*Agropyron spicatum* (Pursh) Scribn. & Smith var. *spicatum*; (Gramineae), Hemi, bearded bluebunch wheatgrass, (N) (V)
Agsu	*Agropyron subsecundum* (Link) Hitchc.; (Gramineae), bearded wheatgrass, (N) (V)
Agtr	*Agropyron trachycaulum* (Link) Richt; (Gramineae), Hemi, slender wheatgrass, (N) (V)
Bogr	*Bouteloua gracilis* (H.B.K.) Lag.; (Gramineae), Hemi, blue grama, (N) (V)
BROMU	*Bromus* sp.
Brin	*Bromus inermis* Leyss; (Gramineae), Hemi, smooth brome, (I) (V)
Brma	*Bromus marginatus* Nees; (Gramineae), Hemi, big mountain brome, (N) (V)
Brte	*Bromus tectorum* L.; (Gramineae), Ther, cheatgrass brome, (I) (V)
CAREX	*Carex* sp.

Table 2.3- 2. (Continued)

Abbrev.	Species
	GRASSES AND GRASS-LIKES (Cont.)
Cage	*Carex geyeri* Boott; (Cyperaceae), Cryp, elk sedge, (N) (V)
Cala 2	*Carex lanuginosa* Michx.; (Cyperaceae), Cryp, wooly sedge, (N) (V)
Cane 2	*Carex nebraskensis* Dewey; (Cyperaceae), Cryp, Nebraska sedge, (N) (V)
Cave 2	*Carex vernacula* L.H. Bailey; (Cyperaceae), Cryp, sedge, (N) (V)
Elma	*Eleocharis macrostachya* Britt.; (Cyperaceae), Cryp, common spikerush, (N) (V)
ELYMU	*Elymus* sp.
Elci	*Elymus cinereus* Scribn. & Merr.; (Gramineae), Hemi, great basin wildrye, (N) (V)
FESTU	*Festuca* sp.; (Gramineae), Hemi, fescue, (N)
Glst	*Glyceria striata* (Lam.) Hitchcock; (Gramineae), Hemi, fowl mannagrass, (N) (V)
HORDE	*Hordeum* sp.
Hobr	*Hordeum brachyantherum* Nevski; (Gramineae), Hemi, meadow barley, (N) (V)
Hoju	*Hordeum jubatum* L.; (Gramineae), Hemi, foxtail barley, (N) (V)
JUNCU	*Juncus* sp.
Juara	*Juncus arcticus* ssp. *ater* (Rydb.) Hulten; (Juncaginaceae), Cryp, wiregrass, (N) (V)
	Juncus balticus; See *Juncus arcticus* spp. *ater*
Jusa	*Juncus saximontanus* A. Nels.; (Juncaginaceae), Cryp, Rocky Mountain rush, (N) (V)
	Koeleria cristata; See *Koeleria gracilis*

Table 2.3-2. (Continued)

Abbrev.	Species
	GRASSES AND GRASS-LIKES (Cont.)
Kogr	*Koeleria gracilis* Pres.; (Gramineae), Hemi, prairie junegrass
Orhy	*Oryzopsis hymenoides* (R. & S.) Ricker; (Gramineae), Hemi, Indian ricegrass, (N) (V)
POA	*Poa* sp.
Poag	*Poa agassizensis* Boivin & D. Loeve; (Gramineae), Hemi, blue grass, (N) (V)
Poam	*Poa ampla* Merr.; (Gramineae), Hemi, big bluegrass, (N) (V)
Poca	*Poa canby* (Scribn.) Piper; (Gramineae), Hemi, Canby bluegrass, (N) (V)
Poco	*Poa compressa* L.; (Gramineae), Hemi, Canada bluegrass, (N) (V)
Pofe	*Poa fendleriana* (Steud.) Vasey; (Gramineae), Hemi, mutton bluegrass, (N) (V)
	Poa interior; See *Poa nemoralis* var. *interior*
Ponei	*Poa nemoralis* L. var. *interior* (Rydb.) Butters & Abbe; (Gramineae), Hemi, interior bluegrass, (N) (V)
Popr	*Poa pratensis* L.; (Gramineae), Hemi, Kentucky bluegrass, (I) (V)
Posa	*Poa sandbergii* Vasey; (Gramineae), Hemi, Sandberg bluegrass, (N) (V)
	Poa secunda; See *Poa sandbergii*
Scac	*Scirpus acutus* Muehl. ex Bigelow; (Cyperaceae), Cryp, tule bulrush, (N) (V)
	Sitanion hystrix; See *Sitanion longifolium*
Silo	*Sitanion longifolium* J.G. Smith; (Gramineae), Hemi, squirreltail, (N) (V)
Spai	*Sporobolus airoides* (Torr.) Torr.; (Gramineae), Hemi, alkali sacaton, (N) (V)

Table 2.3-2. (Continued)

Abbrev.	Species
	GRASSES AND GRASS-LIKES (Cont.)
STIPA	Stipa sp.
Stco 2	Stipa columbiana Mocoun; (Gramineae), Hemi, subalpine needlegrass, (N) (V)
Stco	Stipa comata Trin. & Rupr.; (Gramineae), Hemi, needle-and-thread, (N) (V)
Trma 3	Triglochin maritima L.; (Juncaginaceae), Cryp, shore podgrass, (N)
Tyla	Typha latifolia L. (Typhaceae), Cryp, common cattail, (N)

FOOTNOTES

[1] Abbreviation of genus and species in a four letter code (Plummer et al., 1966).

[2] Author citation, nomenclatural authority cited after each species name and delineated by a semi colon.

[3] The family of plants a species belongs to in parenthesis.

[4] Lifeforms of Plants (Raunkiaer, 1934).

Phan - Phanerophyte; Perennating bud at least 0.25 m above soil surface.

Cham - Chamaephyte; Perennating bud between 0 and 0.25 m above soil surface.

Hemi - Hemicryptophyte; Perennating bud in soil surface.

Cryp - Cryptophyte; Perennating buds covered by soil or water.

Ther - Therophyte; Annual plants, perennating buds contained in seed.

Succ - Succulent; Stems enlarged; serve as water storage organ.

[5] (V) - Voucher specimen collected.

[6] Origin or herbaceous species.

(N) - Native to the North American Continent.

(I) - Introduced from outside the North American Continent.

Table 2.3-3 Species encountered in the herbaceous stratum in the aspen type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. *Carex geyeri*	22.81	85.00	108	100	2281	*	**
2. *Bromus marginatus*	1.68	32.50	34	50	168	*	**
3. *Fragaria* sp.	0.59	20.00	21	75	59	*	**
4. *Aster* sp.	0.59	12.50	13	25	59	*	**
5. *Ancelica* sp.	0.47	15.00	15	50	47	*	**
6. *Agropyron trachycaulum*	0.44	5.00	5	25	44	*	**
7. *Galium boreale*	0.39	20.00	20	100	39	*	**
8. *Stipa* sp.	0.35	7.50	8	75	35	*	**
9. *Thalictrum* sp.	0.33	20.00	20	75	33	*	**
10. *Agropyron spicatum*	0.21	2.50	3	25	21	*	**
11. *Pachystima myrsinites*	0.18	5.00	5	25	18	*	**
12. *Lappula* sp.	0.12	5.00	5	25	12	*	**
13. *Smilacina* sp.	0.12	5.00	5	50	12	*	**
14. *Erigeron* sp.	0.10	2.50	3	25	10	*	**
15. *Thermopsis montana*	0.09	7.50	8	50	9	*	**
16. *Aquilegia caerulea*	0.08	5.00	5	25	8	*	**
17. *Achillea lanulosa*	0.07	10.00	10	75	7	*	**
18. *Geranium richardsonii*	0.06	7.50	8	25	6	*	**
19. *Mertensia* sp.	0.03	2.50	3	25	3	*	**
20. *Sisymbrium altissimum*	0.02	2.50	3	25	2	*	**
21. *Viola* sp.	0.01	2.50	3	25	1	*	**
22. Unknown Compositae	0.18	5.00	5	50	18	*	**
23. Unknown Umbelliferae	0.16	7.50	8	25	16	*	**
All Species	29.03				2903		

Table 2.3-3 Species encountered in the herbaceous stratum in the aspen type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. Carex geyeri	22.81	85.00	108	100	2281	*	**
2. Bromus marginatus	1.68	32.50	34	50	168	*	**
3. Fragaria sp.	0.59	20.00	21	75	59	*	**
4. Aster sp.	0.59	12.50	13	25	59	*	**
5. Ancelica sp.	0.47	15.00	15	50	47	*	**
6. Agropyron trachycaulum	0.44	5.00	5	25	44	*	**
7. Galium boreale	0.39	20.00	20	100	39	*	**
8. Stipa sp.	0.35	7.50	8	75	35	*	**
9. Thalictrum sp.	0.33	20.00	20	75	33	*	**
10. Agropyron spicatum	0.21	2.50	3	25	21	*	**
11. Pachystima myrsinites	0.18	5.00	5	25	18	*	**
12. Lappula sp.	0.12	5.00	5	25	12	*	**
13. Smilacina sp.	0.12	5.00	5	50	12	*	**
14. Erigeron sp.	0.10	2.50	3	25	10	*	**
15. Thermopsis montana	0.09	7.50	8	50	9	*	**
16. Aquilegia caerulea	0.08	5.00	5	25	8	*	**
17. Achillea lanulosa	0.07	10.00	10	75	7	*	**
18. Geranium richardsonii	0.06	7.50	8	25	6	*	**
19. Mertensia sp.	0.03	2.50	3	25	3	*	**
20. Sisymbrium altissimum	0.02	2.50	3	25	2	*	**
21. Viola sp.	0.01	2.50	3	25	1	*	**
22. Unknown Compositae	0.18	5.00	5	50	18	*	**
23. Unknown Umbelliferae	0.16	7.50	8	25	16	*	**
All Species	29.03				2903		

Table 2.3-3 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
MAY-JUNE 1975 (SUMMARY OF 2 TRANSECTS)							
1. *Carex geyeri*	2.60	80.00	83	100	260	*	**
2. *Eriogonum* sp.	0.40	10.00	10	50	40	*	**
3. *Agropyron trachycaulum*	0.23	40.00	40	50	23	*	**
4. *Bromus marginatus*	0.20	35.00	35	50	20	*	**
5. *Senecio* sp.	0.10	10.00	10	50	10	*	**
6. *Smilacina* sp.	0.00	30.00	30	50	0	*	**
7. *Valeriana occidentalis*	0.00	15.00	15	50	0	*	**
8. *Mertensia brevistyla*	0.00	10.00	10	50	0	*	**
9. *Viola palustris*	0.00	10.00	10	50	0	*	**
10. *Achillea lanulosa*	0.00	10.00	10	50	0	*	**
11. *Cirsium* sp.	0.00	5.00	5	50	0	*	**
12. *Cryptantha sericea*	0.00	5.00	5	50	0	*	**
13. *Potentilla pulcherrima*	0.00	5.00	5	50	0	*	**
14. *Thalictrum fendleri*	0.00	5.00	5	50	0	*	**
15. Unknown	0.05	20.00	**	50	5	*	**
All Species	3.58				358		
JULY 1975 (SUMMARY OF 2 TRANSECTS)							
1. *Viola rugulosa*	6.40	30.00	36	50	640	4.7	15.5
2. *Thermopsis montana*	5.45	55.00	60	100	545	4.4	7.9
3. *Osmorhiza depauperata*	5.40	60.00	65	50	540	5.4	11.9
4. *Carex geyeri*	3.35	50.00	53	100	335	*	**
5. *Galium boreale*	3.10	90.00	93	100	310	6.0	6.6
6. *Solidago* sp.	2.30	45.00	47	100	230	1.3	2.9

Table 2.3-3 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
7. *Valeriana occidentalis*	2.25	35.00	37	100	225	1.9	5.4
8. *Bromus marginatus*	2.05	50.00	52	100	205	*	**
9. *Carex vernacula*	1.80	40.00	42	50	180	*	**
10. *Aquilegia caerulea*	1.50	10.00	12	100	150	0.8	7.5
11. *Thalictrum fendleri*	1.45	50.00	51	100	145	1.4	2.7
12. *Smilacina stellata*	1.25	30.00	31	100	125	0.7	2.2
13. *Geranium richardsonii*	1.20	25.00	26	100	120	0.7	2.6
14. *Pachystima myrsinites*	1.00	5.00	6	50	100	0.8	15.0
15. *Potentilla pulcherrima*	0.75	5.00	6	50	75	0.4	7.0
16. *Stipa columbiana*	0.55	25.00	26	50	55	*	**
17. *Koeleria gracilis*	0.55	15.00	16	50	55	*	**
18. *Hackelia floribunda*	0.50	10.00	11	50	50	2.1	20.5
19. *Cirsium arvense*	0.40	10.00	10	50	40	0.3	3.0
20. *Achillea lanulosa*	0.20	10.00	10	100	20	0.3	3.0
21. *Taraxacum officinale*	0.15	5.00	5	50	15	0.1	2.0
22. *Chenopodium leptophyllum*	0.10	5.00	5	50	10	0.7	14.0
23. *Clematis columbiana*	0.10	5.00	5	50	10	0.1	1.0
24. *Collomia linearis*	0.05	5.00	5	50	5	0.2	3.0
25. *Helianthella uniflora*	0.05	5.00	5	50	5	0.1	1.0
All Species	41.90				4190		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-4 Species encountered in the shrub-tree seedling stratum in the aspen type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)									
1. *Symphoricarpos oreophilus*	25.79	100.00	126	100	0.72	2579	5188	*	**
2. *Populus tremuloides*	14.62	93.75	108	100	1.06	1462	2063	*	**
3. *Amelanchier* sp.	13.56	87.50	101	100	1.05	1356	3243	*	**
4. *Rosa woodsii*	4.52	62.50	67	75	0.60	452	1764	*	**
5. *Prunus virginiana*	2.08	62.50	65	100	0.31	208	861	*	**
6. *Quercus gambelii*	0.63	18.75	19	25	1.50	63	83	*	**
7. *Ribes* sp.	0.40	25.00	25	50	0.19	40	500	*	**
8. *Acer glabrum*	0.21	6.25	6	25	0.25	21	28	*	**
9. *Artemisia tridentata*	0.17	12.50	13	25	0.40	17	49	*	**
All Species	61.97					6197	13779		
MAY-JUNE 1975 (SUMMARY OF 3 TRANSECTS)									
1. *Amelanchier alnifolia*	23.12	86.67	110	100	1.73	2312	750	22.08	7176
2. *Symphoricarpos oreophilus*	13.95	100.00	114	100	0.43	1395	3056	0.92	461
3. *Prunus virginiana*	12.77	86.67	99	100	0.53	1277	1961	3.39	1159
4. *Populus tremuloides*	8.10	93.33	101	100	0.64	810	950	6.41	854
5. *Acer glabrum*	7.31	60.00	67	67	1.69	731	122	28.25	706
6. *Ribes* sp.	2.28	60.00	62	67	0.23	228	983	0.02	1
7. *Rosa woodsii*	0.99	93.33	100	100	0.12	99	1061	0.05	7

Table 2.3-4 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
8. Quercus gambelii	0.52	6.67	7	33	0.12	52	6	41.63	347
9. Artemisia tridentata	0.00	13.33	13	67	0.00	0	22	*	**
10. Pseudotsuga menziesii	0.00	13.33	13	33	0.00	0	28	*	**
All Species	69.04					6904	8939		
			JULY 1975 (SUMMARY OF 1 TRANSECT)						
1. Amelanchier alnifolia	39.61	100.00	140	**	1.28	3961	3600	*	**
2. Prunus virginiana	22.39	100.00	122	**	0.57	2239	4467	*	**
3. Populus tremuloides	21.06	100.00	121	**	1.24	2106	1433	*	**
4. Rosa woodsii	12.99	100.00	113	**	0.42	1299	11717	*	**
5. Ribes inerme	6.68	100.00	107	**	0.27	668	8800	*	**
6. Symphoricarpos oreophilus	6.04	100.00	106	**	0.20	604	5417	*	**
7. Sorbus scopulina	5.54	60.00	66	**	1.11	554	117	*	**
8. Acer glabrum	0.00	40.00	40	**	0.00	0	150	*	**
All Species	114.31					11431	35701		

* Value not recorded in the field because of sampling procedure or absence of species.

** Value cannot be calculated because of absence of data.

providing a relative cover of 33 percent in the May-June transects, and 35 percent in the July transect. The cover value for July in excess of 100 percent indicates that two or more species were providing cover over the same interval on the intercept tape. Shrub stratum density was estimated at 0.89 individuals per m^2 in the May-June stands, and 3.57 individuals per m^2 in the July stand. Highest densities were recorded for *Symphoricarpos oreophilus* (0.30 individuals per m^2) and *Prunus virginiana* (0.19 individuals per m^2) for the May-June transects. *Rosa woodsii* (1.17 individuals per m^2) and *Ribes inerme* (0.88 individuals per m^2) contributed the highest densities in July. Mean (average) volume data indicate that *Quercus gambelii* (42 m^3), *Acer glabrum* (28 m^3), and *Amelanchier alnifolia* (22 m^3) were the largest species encountered in the aspen type during the May-June sampling period.

2.3.1.3.1.3 Mature Tree Stratum (Table 2.3-5)

The tree stratum is dominated by one species, *Populus tremuloides*, providing 37 percent cover in May-June, and 38 percent cover for the July sample. *Pseudotsuga menziesii* occurred very infrequently in the mature stratum of the aspen stands sampled. Individual trunks of aspen occurred at densities of 0.58 individuals per 10 m^2 in May-June, and 0.55 individuals per 10 m^2 in the July stand. Aspen trees in the mature class ranged from 7.6 to 48.0 cm dbh, with 40 percent of the trees in the mature class greater than 16 cm dbh. When the mature and tree seedling-sapling classes are combined, 65 percent of all individuals occurred in the tree seedling-sapling class (less than 7.6 cm dbh), indicating substantial vegetative reproduction of aspen clones in the stands sampled (Table 2.3-6).

2.3.1.3.2 Douglas Fir

The Douglas fir vegetation type was sampled during the summer quarter with 2 permanent and 2 nonpermanent transects. Shrub and tree strata were measured on all transects. Fourty quadrats were used to sample the herbaceous stratum on the 2 permanent transects. Each quadrat was sampled in June, and again in July.

Three strata, and a total of 40 species, were identified for the Douglas fir type: 1 species in the mature tree stratum, 15 species in the shrub-tree seedling stratum, and 25 species in the herbaceous stratum. Douglas fir (*Pseudotsuga menziesii*) appeared in both the mature tree and the shrub stratum.

2.3.1.3.2.1 Herbaceous Stratum (Table 2.3-7)

Nine species contributed 9 percent total cover in the May-June quadrats. Dominants were a sedge (*Carex geyeri*) and a low shrub (*Pachystima myrsinites*) contributing a relative cover of 98 percent. Three species of grasses and grass-like species provided 83 percent of the total cover.

Table 2.3-5. Species encountered in the mature tree stratum in the aspen type for RBOSP

Species	Percent Cover	Percent Frequency	Cover m^2/ha	Density #/ha	Basal Area m^2/ha
	OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. *Populus tremuloides*	33.04	93.75	3304	479	13
	MAY-JUNE 1975 (SUMMARY OF 3 TRANSECTS)				
1. *Populus tremuloides*	37.16	100.00	3716	589	13.02
2. *Pseudotsuga menziesii*	1.84	13.33	184	28	1.30
All Species	39.00		3900		14.32
	JULY 1975 (SUMMARY OF 1 TRANSECT)				
1. *Populus tremuloides*	37.62	100.00	3762	550	45.36

Table 2.3-6 Number of individuals/ha by diameter class (cm) of tree species recorded on vegetation transects for RBOSP

Vegetation Type	Diameter Class (cm)[1/]																				
Species	0-7.6	7.6-12	12-16	16-20	20-24	24-28	28-32	32-36	36-40	40-44	44-48	48-52	52-56	56-60	60-64	64-68	68-72	72-76	76-82	82-84	84-86	>86
Douglas Fir																						
Pseudotsuga menzeisii	1635	146	71	67	58	25	21	38	4	13	4	0	0	0	0	4	0	0	0	0	0	0
Aspen																						
Populus tremuloides	1072	204	138	96	75	42	8	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Pinyon-Juniper																						
Juniperus osteosperma	86	15	13	12	14	13	11	11	10	8	5	2	8	1	1	2	3	2	1	2	1	2[2/]
Pinyon-Juniper																						
Pinus edulis	303	31	23	16	19	18	7	7	4	4	2	4	4	1	0	1	2	0	0	0	0	0

[1/] Measured dbh (diameter breast height, ≈1.4 m) for Pseudotsuga menzeizii and Populus tremuloides and below branching (≈.4 m) for Juniperus osteosperma and Pinus edulis.

[2/] Diameters of 99.2 and 103 cm.

Table 2.3-7 Species encountered in the herbaceous stratum in the Douglas fir type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			OCTOBER 1974 (SUMMARY OF 6 TRANSECTS)				
1. *Carex geyeri*	18.69	90.00	109	100	1869	*	**
2. *Pachystima myrsinites*	0.80	15.00	16	83	80	*	**
3. *Galium boreale*	0.53	25.00	26	83	53	*	**
4. *Aster* sp.	0.49	13.00	13	33	49	*	**
5. *Thermopsis montana*	0.15	3.33	3	17	15	*	**
6. *Erigeron* sp.	0.08	3.33	3	33	8	*	**
7. *Smilacina* sp.	0.08	1.67	2	17	8	*	**
8. *Bromus marginatus*	0.06	5.00	5	17	6	*	**
9. *Astragalus* sp.	0.06	6.67	7	17	6	*	**
10. *Agropyron smithii*	0.04	3.33	3	17	4	*	**
11. *Poa* sp.	0.03	3.33	3	33	3	*	**
12. *Achillea lanulosa*	0.03	1.67	2	17	3	*	**
13. *Thalictrum fendleri*	0.03	1.67	2	17	3	*	**
14. *Angelica* sp.	0.01	1.67	2	17	1	*	**
15. *Mahonia repens*	0.01	1.67	2	17	1	*	**
16. Unknown Compositae	0.36	6.67	7	33	36	*	**
All Species	21.45				2145		
			MAY-JUNE 1975 (SUMMARY OF 2 TRANSECTS)				
1. *Carex geyeri*	7.08	85.00	92	100	708	*	**
2. *Pachystima myrsinites*	1.30	35.00	36	50	130	*	**
3. *Mahonia repens*	0.15	10.00	10	100	15	*	**
4. *Achillea lanulosa*	0.00	5.00	5	50	0	*	**

Table 2.3-7 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
5. Astragalus sp.	0.00	5.00	5	50	0	*	**
6. Bromus sp.	0.00	5.00	5	50	0	*	**
7. Carex sp.	0.00	5.00	5	50	0	*	**
8. Lithospermum ruderale	0.00	5.00	5	50	0	*	**
9. Viola sp.	0.00	5.00	5	50	0	*	**
All Species	8.53				853		
JULY 1975 (SUMMARY OF 2 TRANSECTS)							
1. Carex geyeri	10.35	95.00	105	100	1035	*	**
2. Thalictrum fendleri	3.20	20.00	23	100	320	3.0	14.8
3. Astragalus tenellus	1.80	30.00	31	50	180	1.2	4.0
4. Osmorhiza depauperata	1.10	20.00	21	50	110	1.1	5.5
5. Vicia americana	1.10	20.00	21	50	110	1.0	5.0
6. Solidago sp.	1.10	10.00	11	50	110	1.2	12.0
7. Galium boreale	0.70	35.00	36	100	70	1.7	4.9
8. Achillea lanulosa	0.55	10.00	11	100	55	0.7	7.0
9. Aquilegia caerulea	0.50	5.00	6	50	50	0.2	3.0
10. Viola adunca	0.45	25.00	25	50	45	0.5	1.8
11. Stipa columbiana	0.30	10.00	10	50	30	*	**
12. Chenopodium fremontii	0.30	5.00	5	50	30	0.5	10.00
13. Erigeron speciosus	0.20	15.00	15	50	20	0.2	1.3
14. Lithospermum ruderale	0.20	5.00	5	50	20	0.1	2.0
15. Smilacina stellata	0.20	5.00	5	50	20	0.1	1.0
16. Agropyron trachycaulum	0.15	5.00	5	50	15	*	1.0

Table 2.3-7 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constance	Cover m^2/ha	Density #/Quad	Sociability
17. *Helianthella uniflora*	0.10	5.00	5	50	10	0.2	**
18. *Mahonia repens*	0.10	5.00	5	50	10	0.1	3.0
19. *Thermopsis montana*	0.10	5.00	5	50	10	0.1	1.0
20. *Bromus marginatus*	0.05	10.00	10	50	5	*	**
21. *Crepis acuminata*	0.05	5.00	5	50	5	0.1	1.0
22. *Koeleria gracilis*	0.05	5.00	5	50	5	*	**
23. *Taraxacum officinale*	0.05	5.00	5	50	5	0.1	3.0
All Species	22.70				2270		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

During the July sampling period, 23 species, consisting primarily of perennial forbs, contributed a total cover of 23 percent. The dominant species was a sedge (Carex geyeri) with a relative cover of 46 percent. Seventy-eight percent of the species encountered in June were again encountered in July. Five species of grasses and sedges provided 48 percent of the total cover. Density and frequency values were low for all herbaceous species except Carex geyeri, indicating a dispersed and heterogeneous distribution of species.

2.3.1.3.2.2 Shrub Stratum (Table 2.3-8)

Nine species contributed 46 percent total cover during May-June, and eleven species provided 43 percent total cover during July. Amelanchier utahensis, Pseudotsuga menziesii, and Symphoricarpos oreophilus shared dominance in the May-June transects, together providing a relative cover of 79 percent. In the July transect, Amelanchier utahensis, and Symphoricarpos oreophilus shared dominance contributing a relative cover of 77 percent. Shrub stratum density was estimated at 0.8 individuals per m^2 for May-June transects, and 1.24 individuals per m^2 for July. Highest densities were recorded for Symphoricarpos oreophilus (0.37 individuals per m^2) and Pseudotsuga menziesii (0.21 individuals per m^2) in the May-June transects, and Symphoricarpos oreophilus (0.53 individuals per m^2) and Amelanchier utahensis (0.35 individuals per m^2) were the most abundant species in the July transect. The high density for Pseudotsuga menziesii in May-June represents a large number of recently germinated seedlings. Mean (average) volume values indicate that Acer glabrum and Amelanchier utahensis are the largest species.

2.3.1.3.2.3 Mature Tree Stratum (Table 2.3-9)

The mature tree stratum is dominated by one species, Pseudotsuga menziesii. Douglas fir contributed 58 percent cover in the stands sampled in May-June and 41 percent cover in the stand sampled in July. Mature trees occurred at a density of 0.40 trees per 10 m^2 for the May-June transects, and 0.44 trees per 10 m^2 for July.

Pseudotsuga menziesii in the mature class ranged in size from 7.6 cm to 68.0 cm dbh, with 52 percent of the trees greater than 16 cm dbh (Table 2.3- 5). When mature and tree seedling-sapling strata are combined, 78 percent of all Douglas fir individuals were classified as seedlings or saplings (less than 7.6 cm dbh), indicating substantial reproduction in the stands sampled.

2.3.1.3.3 Mixed Brush

During the summer quarter, the mixed brush type was sampled with 5 permanent and 8 non-permanent transects. Shrub and tree strata were measured on all transects. A total of 50, 0.5 m^2 quadrats were used to sample the herbaceous stratum on the 5 permanent transects. Each quadrat was sampled during May-June, and again in July.

Table 2.3-8 Species encountered in the shrub-tree seedling stratum in the Douglas fir type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
			OCTOBER 1974 (SUMMARY OF 6 TRANSECTS)						
1. Amelanchier sp.	19.59	95.83	115	100	2.52	1959	4555	*	**
2. Symphoricarpos oreophilus	10.78	87.50	98	100	0.54	1078	5144	*	**
3. Prunus virginiana	4.17	20.83	25	33	0.86	417	731	*	**
4. Pseudotsuga menziesii	3.17	87.50	91	100	1.27	317	435	*	**
5. Artemisia tridentata	0.51	12.50	13	17	0.46	51	139	*	**
6. Rosa woodsii	0.49	33.33	34	67	0.19	49	491	*	**
7. Quercus gambelii	0.40	12.50	13	17	0.21	40	593	*	**
8. Populus tremuloides	0.25	8.33	9	33	0.45	25	23	*	**
9. Acer glabrum	0.00	4.17	4	17	0.00	0	23	*	**
All Species	39.35					3935	12134		
			MAY-JUNE 1975 (SUMMARY OF 3 TRANSECTS)						
1. Amelanchier utahensis	14.53	86.67	102	100	0.97	1453	567	468	265,356
2. Pseudotsuga menziesii	11.26	100.00	111	100	0.72	1126	2172	22	47,784
3. Symphoricarpos oreophilus	10.44	100.00	110	100	0.35	1044	3711	0	408
4. Prunus virginiana	4.65	60.00	65	67	0.56	465	589	5	2,945
5. Acer glabrum	2.62	33.00	36	67	0.98	262	144	644	95,616
6. Quercus gambelii	2.05	26.67	29	33	0.47	205	511	88	44,968
7. Rosa woodsii	0.16	60.00	60	100	0.05	16	450	0	**
8. Chrysothamnus viscidiflorus	0.04	6.67	7	33	0.11	4	22	0	**
9. Artemisia tridentata	0.00	6.67	7	33	0.00	0	22	0	**
All Species	45.75					4575	8183		

Table 2.3-8 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
		JULY 1975 (SUMMARY OF 1 TRANSECT)							
1. *Amelanchier utahensis*	18.86	100.00	119	**	0.47	1886	3533	*	**
2. *Symphoricarpos oreophilus*	14.34	100.00	114	**	0.28	1434	5385	*	**
3. *Pseudotsuga menziesii*	2.92	100.00	103	**	0.29	292	1017	*	**
4. *Quercus gambelii*	4.11	20.00	24	**	0.21	411	1716	*	**
5. *Ribes cereum*	2.11	100.00	102	**	0.35	211	350	*	**
6. *Chrysothamnus nauseosus*	0.39	20.00	20	**	0.39	39	17	*	**
7. *Holodiscus dumosus*	0.28	60.00	60	**	0.28	28	267	*	**
8. *Rosa woodsii*	0.23	20.00	20	**	0.23	23	17	*	**
9. *Cercocarpus montanus*	0.00	40.00	40	**	0.00	0	50	*	**
10. *Sambucus coerulea*	0.00	40.00	40	**	0.00	0	33	*	**
11. *Amelanchier alnifolia*	0.00	20.00	20	**	0.00	0	33	*	**
All Species	43.24					4324	12417		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-9. Species encountered in the mature tree stratum in the Douglas fir type for RBOSP

Species	Percent Cover	Percent Frequency	Cover m^2/ha	Density #/ha	Basal Area m^2/ha
	OCTOBER 1974 (SUMMARY OF 6 TRANSECTS)				
1. *Pseudotsuga menziesii*	70.74	95.83	7074	514	23.00
2. *Populus tremuloides*	0	4.17	0	5	.06
All Species	70.74			519	23.00
	MAY-JUNE 1975 (SUMMARY OF 3 TRANSECTS)				
1. *Pseudotsuga menziesii*	58.27	100.00	5827	444	17.8
	JULY 1975 (SUMMARY OF 1 TRANSECT)				
1. *Pseudotsuga menziesii*	40.84	100.00	4084	483	81

Three strata and 76 species were identified for the mixed brush type: 1 species in the tree stratum, 18 species in the shrub-tree seedling stratum, and 58 species in the herbaceous stratum. Pinus edulis was found in both the mature tree and the shrub strata.

2.3.1.3.3.1 Herbaceous Stratum (Table 2.3-10)

Forty-four species contributed a total cover of 5 percent during the May-June sampling period. A sedge, Carex geyeri, and grass, Oryzopsis hymenoides shared dominance, providing a relative cover of 51 percent. Nine species of grasses and sedges contributed 67 percent of the total cover.

Forty-six species contributed 11 percent total cover during July. A sedge, Carex geyeri, a perennial forb, Eriogonum umbellatum, and a grass, Oryzopsis hymenoides shared dominance, providing a relative cover of 40 percent. Twelve species of grasses and sedges contributed 55 percent of the cover. Sociability values are low for all forb species reflecting the low density and low frequency of individuals of this group. Seventy-three percent of the species found during May-June were found again in July.

2.3.1.3.3.2 Shrub Stratum (Table 2.3-11)

Twelve species contributed a total cover of 54 percent during the May-June sampling period, and 13 species provided 77 percent cover on stands sampled during July. Amelanchier utahensis was the dominant species for the June transects, with a relative cover of 50 percent, and Amelanchier utahensis and Symphoricarpos oreophilus shared dominance on the July transects, together providing a relative cover of 83 percent. Shrub stratum density was estimated at 1.11 individuals per m^2 for May-June transects, and 1.07 individuals per m^2 for the July transects. The highest density was recorded for Artemisia tridentata (0.38 individuals per m^2) for the May-June sampling period, and Symphoricarpos oreophilus (0.56 individuals per m^2) was the most abundant species in the July transects.

The largest species encountered in the mixed brush type, based on mean (average) volume values were Amelanchier utahensis (236 m^3) and Quercus gambelii (136 m^3). The large volumes represent large clones of these species that frequently occur on mesic sites.

2.3.1.3.3.3 Mature Tree Stratum (Table 2.3-12)

Mature trees are extremely rare in the mixed brush transects sampled. Pinus edulis, contributing less than 1 percent cover and 4 individuals per hectare, was the only species recorded. The presence of young Pseudotsuga menziesii and Populus tremuloides in the shrub stratum indicates that a mature tree stratum may develop in these stands in the future.

Table 2.3-10 Species encountered in the herbaceous stratum in the mixed brush for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			OCTOBER 1974 (SUMMARY OF 13 TRANSECTS)				
1. *Carex geyeri*	8.79	33.08	42	62	879	*	**
2. *Poa sandbergii*	2.64	21.54	24	54	264	*	**
3. *Poa* sp.	2.13	27.69	30	54	213	*	**
4. *Eriogonum* sp.	1.08	16.15	17	31	108	*	**
5. *Agropyron trachycaulum*	0.91	20.77	22	54	91	*	**
6. *Lupinus* sp.	0.83	15.38	16	46	83	*	**
7. *Phlox hoodii*	0.80	10.77	12	31	80	*	**
8. *Eriogonum umbellatum*	0.56	10.00	11	38	56	*	**
9. *Penstemon caespitosus*	0.49	11.54	12	38	49	*	**
10. *Pachystima myrsinites*	0.43	2.31	3	15	43	*	**
11. *Erigeron* sp.	0.42	19.23	20	62	42	*	**
12. *Agropyron smithii*	0.35	9.23	10	23	35	*	**
13. *Koeleria gracilis*	0.23	6.93	7	8	23	*	**
14. *Stipa comata*	0.23	2.31	3	8	23	*	**
15. *Bromus marginatus*	0.21	5.38	6	23	21	*	**
16. *Agropyron spicatum*	0.18	3.85	4	8	18	*	**
17. *Geranium richardsonii*	0.11	3.85	4	8	11	*	**
18. *Astragalus* sp.	0.08	5.38	5	15	8	*	**
19. *Oryzopsis hymenoides*	0.06	4.62	5	8	6	*	**
20. *Achillea lanulosa*	0.06	3.85	4	23	6	*	**
21. *Stipa* sp.	0.06	3.85	4	15	6	*	**
22. *Hedysarum boreale*	0.06	2.31	2	8	6	*	**
23. *Thalictrum fendleri*	0.04	0.77	1	8	4	*	**

Table 2.3-10 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad.	Sociability
24. *Haplopappus nuttallii*	0.03	3.08	3	23	3	*	**
25. *Galium boreale*	0.03	2.31	2	23	3	*	**
26. *Ipomopsis* sp.	0.03	1.54	2	15	3	*	**
27. *Frasera speciosa*	0.03	0.77	1	8	3	*	**
28. *Phlox* sp.	0.03	0.77	1	8	3	*	**
29. *Muhlenbergia* sp.	0.02	1.54	2	15	2	*	**
30. *Oxytropis lambertii*	0.02	0.77	1	8	2	*	**
31. *Solidago* sp.	0.01	1.54	2	15	1	*	**
32. *Antennaria* sp.	0.01	0.77	1	8	1	*	**
33. *Senecio* sp.	0.01	0.77	1	8	1	*	**
34. *Sitanion longifolium*	0.01	0.77	1	8	1	*	**
35. *Gutierrezia sarothrae*	0.00	0.77	1	8	0	*	**
36. *Physaria floribunda*	0.00	0.77	1	8	0	*	**
37. Unknown Compositae	0.22	7.69	8	38	22	*	**
38. Unknown Boraginaceae	0.12	0.77	1	8	12	*	**
39. Unknown Crucifereae	0.05	3.85	4	15	5	*	**
40. Unknown Umbellifereae	0.02	0.77	1	8	2	*	**
All Species	21.44				2144		

Table 2.3-10 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
MAY-JUNE 1975 (SUMMARY OF 5 TRANSECTS)							
1. *Carex geyeri*	1.96	30.00	32	60	196	*	**
2. *Oryzopsis hymenoides*	0.52	28.00	29	80	52	*	**
3. *Haplopappus nuttallii*	0.32	20.00	20	40	32	*	**
4. *Agropyron trachycaulum*	0.30	20.00	20	60	30	*	**
5. *Penstemon caespitosus*	0.22	18.00	18	80	22	*	**
6. *Koeleria gracilis*	0.20	22.00	22	40	20	*	**
7. *Mahonia repens*	0.16	10.00	10	20	16	*	**
8. *Stipa* sp.	0.12	10.00	10	20	12	*	**
9. *Cryptantha sericea*	0.12	4.00	4	20	12	*	**
10. *Linum lewisii*	0.10	10.00	10	40	10	*	**
11. *Balsamorhiza sagittata*	0.10	4.00	4	20	10	*	**
12. *Poa sandbergii*	0.08	8.00	8	40	8	*	**
13. *Eriogonum umbellatum*	0.08	6.00	6	60	8	*	**
14. *Osmorhiza depauperata*	0.08	4.00	4	20	8	*	**
15. *Eriogonum ovalifolium*	0.06	6.00	6	20	6	*	**
16. *Lupinus* sp.	0.06	6.00	6	20	6	*	**
17. *Clematis hirsutissima*	0.06	4.00	4	20	6	*	**
18. *Gutierrezia sarothrae*	0.04	4.00	4	20	4	*	**
19. *Achillea lanulosa*	0.04	2.00	2	20	4	*	**
20. *Physaria floribunda*	0.02	10.00	10	40	2	*	**
21. *Agropyron smithii*	0.02	4.00	4	40	2	*	**
22. *Frasera* sp.	0.02	4.00	4	20	2	*	**
23. *Ipomopsis* sp.	0.02	4.00	4	20	2	*	**

Table 2.3-10 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
24. *Solidago* sp.	0.02	4.00	4	40	2	*	**
25. *Aster* sp.	0.02	2.00	2	20	2	*	**
26. *Eriogonum* sp.	0.02	2.00	2	20	2	*	**
27. *Lithospermum ruderale*	0.02	2.00	2	20	2	*	**
28. *Senecio integerrimus*	0.02	2.00	2	20	2	*	**
29. *Collinsia parviflora*	0.01	14.00	14	60	1	*	**
30. *Poa* sp.	0.01	12.00	12	40	1	*	**
31. *Crepis acuminata*	0.01	4.00	4	40	1	*	**
32. *Erigeron* sp.	0.00	14.00	14	40	0	*	**
33. *Antennaria* sp.	0.00	8.00	8	40	0	*	**
34. *Delphinium nelsonii*	0.00	8.00	8	40	0	*	**
35. *Astragalus* sp.	0.00	4.00	4	40	0	*	**
36. *Taraxacum officinale*	0.00	4.00	4	20	0	*	**
37. *Bromus marginatus*	0.00	2.00	2	20	0	*	**
38. *Cirsium arvense*	0.00	2.00	2	20	0	*	**
39. *Cryptantha sericea*	0.00	2.00	2	20	0	*	**
40. *Cymopterus* sp.	0.00	2.00	2	20	0	*	**
41. *Galium boreale*	0.00	2.00	2	20	0	*	**
42. *Lappula redowskii*	0.00	2.00	2	20	0	*	**
43. *Phlox longifolia*	0.00	2.00	2	20	0	*	**
44. *Trifolium gymnocarpon*	0.00	2.00	2	20	0	*	**
Unknown	0.08	6.00	**	**	8	*	**
All Species	4.91				491		

Table 2.3-10 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad-	Sociability
			JULY 1975 (SUMMARY OF 5 TRANSECTS)				
1. Carex geyeri	2.50	32.00	34	40	250	*	**
2. Eriogonum umbellatum	1.08	16.00	17	60	108	1.3	7.9
3. Oryzopsis hymenoides	0.98	28.00	29	80	98	*	**
4. Stipa comata	0.98	10.00	11	20	98	*	**
5. Poa sandbergii	0.90	16.00	17	20	90	*	**
6. Agropyron trachycaulum	0.64	32.00	33	60	64	*	**
7. Haplopappus nuttallii	0.64	22.00	23	40	64	0.8	3.5
8. Pensteron caespitosus	0.54	26.00	27	60	54	0.9	3.3
9. Gutierrezia sarothrae	0.52	6.00	7	40	52	0.5	8.3
10. Mahonia repens	0.38	14.00	14	40	38	0.5	3.5
11. Linum lewisii	0.26	20.00	20	60	26	0.7	3.3
12. Koeleria gracilis	0.26	10.00	10	40	26	*	**
13. Cryptantha sericea	0.20	26.00	26	80	20	0.5	1.9
14. Comandra umbellata	0.16	8.00	8	20	16	0.6	7.0
15. Crepis acuminata	0.12	6.00	6	60	12	0.1	2.0
16. Pachystima myrsinites	0.12	4.00	4	20	12	0.1	3.0
17. Angelica ampla	0.10	6.00	6	20	10	0.1	2.0
18. Lupinus caudatus	0.10	6.00	6	20	10	0.1	1.3
19. Balsamorhiza sagittata	0.10	2.00	2	20	10	0.0	1.0
20. Physaria floribunda	0.08	10.00	10	40	8	0.2	2.0
21. Erigeron pumilus	0.06	8.00	8	20	6	0.1	1.3
22. Galium boreale	0.06	6.00	6	20	6	0.3	5.0

Table 2.3-10 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
23. Penstemon sp.	0.06	4.00	4	20	6	0.1	2.0
24. Heuchera parvifolia	0.06	4.00	4	20	6	0.0	1.0
25. Ipomopsis aggregata	0.06	4.00	4	20	6	0.0	1.0
26. Hedysarum boreale	0.06	2.00	2	20	6	0.0	2.0
27. Clematis hirsutissima	0.06	2.00	2	20	6	0.0	1.0
28. Elymus cinereus	0.06	2.00	2	20	6	*	**
29. Astragalus diversifolius	0.04	6.00	6	40	4	0.1	2.0
30. Erysimum asperum	0.04	2.00	2	20	4	0.1	3.0
31. Lithospermum ruderale	0.04	2.00	2	20	4	0.0	1.0
32. Bromus tectorum	0.02	4.00	4	20	2	0.1	2.5
33. Astragalus chamaeleuce	0.02	2.00	2	20	2	0.1	5.0
34. Antennaria pulcherrima	0.02	2.00	2	20	2	0.0	1.0
35. Cirsium sp.	0.02	2.00	2	20	2	0.0	1.0
36. Sphaeralcea coccinea	0.02	2.00	2	20	2	0.0	1.0
37. Phlox longifolia	0.00	12.00	12	60	0	0.2	1.7
38. Collinsia parviflora	0.00	10.00	10	40	0	0.3	3.2
39. Chenopodium fremontii	0.00	4.00	4	20	0	0.1	2.0
40. Achillea lanulosa	0.00	2.00	2	20	0	0.1	4.0
41. Agoseris glauca	0.00	2.00	2	20	0	0.0	1.0
42. Agropyron smithii	0.00	2.00	2	20	0	*	**
43. Bromus marginatus	0.00	2.00	2	20	0	*	**
44. Carex sp.	0.00	2.00	2	20	0	*	**
45. Erigeron eatonii	0.00	2.00	2	20	0	0.0	1.0
46. Poa sp.	0.00	2.00	2	20	0	**	**
All Species	11.48				1148		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-11. Species encountered in the shrub-tree seedling stratum in the mixed brush type for RBOSP

	Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
				OCTOBER 1974 (SUMMARY OF 13 TRANSECTS)						
1.	*Amelanchier utahensis*	16.72	100.00	117	100	0.89	1672	4391	*	**
2.	*Artemisia tridentata*	12.60	94.23	107	100	0.41	1260	5782	*	**
3.	*Symphoricarpos oreophilus*	7.26	98.08	105	100	0.43	726	4637	*	**
4.	*Quercus gambelii*	2.09	11.54	14	15	3.27	209	312	*	**
5.	*Chrysothamnus viscidiflorus*	0.77	67.31	68	77	0.18	77	1100	*	**
6.	*Purshia tridentata*	0.58	34.62	35	54	0.57	58	340	*	**
7.	*Cercocarpus montanus*	0.47	15.38	16	31	0.62	47	147	*	**
8.	*Pinus edulis*	0.04	32.69	33	46	0.30	4	49	*	**
9.	*Chrysothamnus nauseosus*	0.03	11.54	12	15	0.20	3	24	*	**
10.	*Juniperus osteosperma*	0.00	17.31	17	38	0.00	0	26	*	**
11.	*Tetradymia canescens*	0.00	7.69	8	15	0.00	0	17	*	**
12.	*Pseudotsuga menziesii*	0.00	1.92	2	8	0.00	0	4	*	**
	All Species	40.56					4056	16829		
				MAY-JUNE 1975 (SUMMARY OF 9 TRANSECTS)						
1.	*Amelanchier utahensis*	26.87	95.56	122	100	1.14	2687	2506	235.92	86503
2.	*Symphoricarpos oreophilus*	8.83	95.56	104	100	0.47	883	2563	2.31	569
3.	*Artemisia tridentata*	6.92	82.22	89	89	0.39	692	3804	0.18	22
4.	*Quercus gambelii*	5.43	17.78	23	33	1.96	543	133	135.90	8507
5.	*Purshia tridentata*	1.71	40.00	42	56	0.61	171	326	0.42	23
6.	*Prunus virginiana*	0.41	17.78	18	33	0.34	41	141	0.01	0
7.	*Chrysothamnus viscidiflorus*	0.23	42.22	42	89	0.14	23	374	0.00	0

Table 2.3-11. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
8. Tetradymia canescens	0.18	22.22	22	44	0.10	18	702	0.00	0
9. Chrysothamnus nauseosus	0.15	6.67	7	11	0.34	15	41	0.00	0
10. Pinus edulis	0.05	20.00	20	33	0.49	5	43	8.18	27
11. Juniperus osteosperma	0.00	4.44	4	11	0.00	0	4	0.00	0
12. Ceanothus martini	0.00	2.22	2	11	0.00	0	50	0.00	0
All Species	53.61					5361	11143		
JULY 1975 (SUMMARY OF 4 TRANSECTS)									
1. Amelanchier utahensis	39.95	100.00	140	100	0.76	3995	2508	*	**
2. Symphoricarpos oreophilus	24.08	100.00	124	100	0.44	2408	5654	*	**
3. Artemisia tridentata	6.35	80.00	86	100	0.33	635	1271	*	**
4. Prunus virginiana	3.85	25.00	29	50	0.62	385	471	*	**
5. Quercus gambelii	1.74	15.00	17	25	0.77	174	163	*	**
6. Rosa woodsii	0.53	25.00	26	50	0.36	53	71	*	**
7. Chrysothamnus viscidiflorus	0.34	50.00	50	75	0.15	34	500	*	**
8. Ribes inerme	0.00	15.00	15	75	0.00	0	21	*	**
9. Populus tremuloides	0.00	10.00	10	25	0.00	0	17	*	**
10. Chrysothamnus nauseosus	0.00	10.00	10	25	0.00	0	8	*	**
11. Amelanchier alnifolia	0.00	5.00	5	25	0.00	0	46	*	**
12. Cercocarpus montanus	0.00	5.00	5	25	0.00	0	4	*	**
13. Pseudotsuga menziesii	0.00	5.00	5	25	0.00	0	4	*	**
All Species	76.82					7682	10738		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-12. Species encountered in the mature tree stratum in the mixed brush type for RBOSP

Species	Percent Cover	Percent Frequency	Cover m^2/ha	Density #/ha	Basal Area m^2/ha
	MAY-JUNE 1975 (SUMMARY OF 9 TRANSECTS)				
1. Pinus edulis	.19	4.44	19	4	.05

2.3.1.3.4 Pinyon-Juniper

During the summer quarter, the pinyon-juniper type was sampled with 7 permanent and 12 non-permanent transects. Shrub and tree strata were measured on all transects. Seventy, 0.5 m^2 quadrats were used to sample the herbaceous stratum on the 7 permanent transects. Each quadrat was sampled during May-June and again in late July.

Three strata and 61 species were identified for the pinyon-juniper type: 2 species in the tree stratum, 14 species in the shrub stratum, and 47 species in the herbaceous stratum. *Pinus edulis* and *Juniperus osteosperma* occurred in both the shrub and the mature tree strata.

2.3.1.3.4.1 Herbaceous Stratum (Table 2.3-13)

Forty-two species contributed a total cover of 2 percent for the May-June sampling period. Three grass species, *Agropyron trachycaulum*, *Oryzopsis hymenoides*, and *Poa sandbergii*, shared dominance, providing a relative cover of 44 percent. Eleven grasses and sedges contributed 72 percent of the total cover.

Thirty-nine species contributed a total cover of 6 percent during July. Three grass species, *Agroypron trachycaulum*, *Oryzopsis hymenoides*, and *Poa sandbergii*, again shared dominance, providing a relative cover of 38 percent. Nine grass species contributed 62 percent of the total cover. Eighty-two percent of the species found in June were found again during the July sampling period.

In general, forb species occurred at low densities and frequencies, indicating the highly scattered distribution of this group. Constancy values were low for the majority of the species encountered, indicating considerable variation in the species composition over the extent of this type.

2.3.1.3.4.2 Shrub Stratum (Table 2.3- 14)

Fourteen species contributed a total cover of 9 percent for the May-June transects, and eleven species provided a total cover of 13 percent for July transects. *Artemisia tridentata* was the dominant species in the May-June transects, with a relative cover of 52 percent, and *Amelanchier utahensis* was the dominant species in the July transects, with a relative cover of 40 percent. Shrub stratum density was estimated at 0.33 individuals per m^2 for the May-June transects, and 0.41 individuals per m^2 for the July transects. The highest density was recorded for *Artemisia tridentata* during both sampling periods (0.17 individuals per m^2 in May-June and 0.13 individuals per m^2 in July). Mean volume values indicate that *Pinus edulis* (0.36 m^3) and *Amelanchier utahensis* (0.40 m^3) are the largest species occurring in this stratum in the pinyon-juniper type.

Table 2.3-13. Species encountered in the herbaceous stratum in the pinyon-juniper type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
		OCTOBER 1974 (SUMMARY OF 26 TRANSECTS)					
1. *Poa sandbergii*	0.98	23.85	25	50	98	*	**
2. *Agropyron trachycaulum*	0.86	27.69	29	69	86	*	**
3. *Poa* sp.	0.48	12.31	13	30	48	*	**
4. *Oryzopsis hymenoides*	0.28	11.92	12	50	28	*	**
5. *Cryptantha sericea*	0.24	9.23	9	38	24	*	**
6. *Carex* sp.	0.23	4.62	5	12	23	*	**
7. *Phlox hoodii*	0.22	8.08	8	26	22	*	**
8. *Haplopappus nuttallii*	0.21	22.31	23	50	21	*	**
9. *Gutierrezia sarothrae*	0.20	7.69	8	31	20	*	**
10. *Arenaria* sp.	0.13	6.92	7	31	13	*	**
11. *Eriogonum* sp.	0.10	6.15	6	19	10	*	**
12. *Koeleria gracilis*	0.09	9.62	10	4	9	*	**
13. *Mentzelia* sp.	0.09	1.54	2	4	9	*	**
14. *Bouteloua gracilis*	0.08	1.15	1	8	8	*	**
15. *Penstemon caespitosus*	0.08	3.46	4	15	8	*	**
16. Moss	0.07	0.38	<1	4	7	*	**
17. *Agropyron smithii*	0.06	2.69	3	12	6	*	**
18. *Lithospermum* sp.	0.06	2.31	2	12	6	*	**
19. *Phlox* sp.	0.05	3.85	4	15	5	*	**
20. *Sitanion longifolium*	0.04	5.00	5	31	4	*	**
21. *Chenopodium* sp.	0.04	1.92	2	12	4	*	**
22. *Erigeron* sp.	0.04	6.15	6	31	4	*	**
23. *Physaria floribunda*	0.03	8.08	8	46	3	*	**

Table 2.3-13. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
24. *Agropyron spicatum*	0.03	0.77	1	4	3	*	**
25. *Aster* sp.	0.02	1.54	2	15	2	*	**
26. *Penstemon* sp.	0.01	2.69	3	15	1	*	**
27. *Lupinus* sp.	0.01	1.54	2	8	1	*	**
28. *Eriogonum umbellatum*	0.01	1.15	1	12	1	*	**
29. *Stipa* sp.	0.01	1.15	1	8	1	*	**
30. *Antennaria* sp.	0.01	0.77	1	4	1	*	**
31. *Euphorbia* sp.	0.01	0.38	1	4	1	*	**
32. *Mahonia repens*	0.01	0.38	1	4	1	*	**
33. *Oenothera* sp.	0.01	0.38	1	4	1	*	**
34. *Plantago* sp.	0.01	0.38	1	4	1	*	**
35. *Astragalus* sp.	0.00	1.15	1	8	0	*	**
36. *Chaenactis* sp.	0.00	0.77	1	8	0	*	**
37. *Descurania* sp.	0.00	0.77	1	8	0	*	**
38. *Lepidium* sp.	0.00	0.77	1	4	0	*	**
39. *Cirsium* sp.	0.00	0.77	1	4	0	*	**
40. *Balsamorhiza sagittata*	0.00	0.38	1	4	0	*	**
41. *Bromus tectorum*	0.00	0.38	1	4	0	*	**
42. Unknown Compositae	0.21	4.62	5	12	21	*	**
43. Unknown Gramineae	0.11	1.92	2	8	11	*	**
44. Unknown Baraginaceae	0.03	1.54	2	4	3	*	**
45. Unknown Cruciferae	0.01	2.31	2	23	1	*	**
All Species	5.16				516		

Table 2.3-13. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
MAY-JUNE 1975 (SUMMARY OF 7 TRANSECTS)							
1. Agropyron trachycaulum	0.46	48.57	49	100	46	*	**
2. Oryzopsis hymenoides	0.31	28.57	29	71	31	*	**
3. Poa sandbergii	0.29	17.14	17	57	29	*	**
4. Phlox hoodii	0.22	25.71	26	71	22	*	**
5. Stipa sp.	0.21	11.43	12	29	21	*	**
6. Koeleria gracilis	0.15	21.43	22	57	15	*	**
7. Haplopappus nuttallii	0.11	18.57	19	71	11	*	**
8. Poa sp.	0.11	15.71	16	57	11	*	**
9. Antennaria sp.	0.10	15.71	16	57	10	*	**
10. Cryptantha sericea	0.02	5.71	6	14	2	*	**
11. Poa fendleriana	0.07	1.43	2	14	7	*	**
12. Carex geyeri	0.06	4.29	4	29	6	*	**
13. Eriogonum sp.	0.05	4.29	4	14	5	*	**
14. Sitanion longifolium	0.04	10.00	10	57	4	*	**
15. Eriogonum umbellatum	0.04	2.86	3	14	4	*	**
16. Festuca sp.	0.02	5.71	6	14	2	*	**
17. Agropyron smithii	0.01	2.86	3	29	1	*	**
18. Balsamorhiza sagittata	0.01	1.43	1	14	1	*	**
19. Lomatium sp.	0.01	1.43	1	14	1	*	**
20. Trifolium gymnocarpon	0.00	8.57	9	29	0	*	**
21. Physaria floribunda	0.00	5.71	6	43	0	*	**
22. Chaenactis douglasii	0.00	4.29	4	14	0	*	**

Table 2.3-13. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
23. *Cymopterus* sp.	0.00	4.29	4	29	0	*	**
24. *Sisymbrium* sp.	0.00	4.29	4	29	0	*	**
25. *Sphaeralcea coccinea*	0.00	4.29	4	14	0	*	**
26. *Arenaria* sp.	0.00	2.86	3	14	0	*	**
27. *Descurainia pinnata*	0.00	2.86	3	14	0	*	**
28. *Agoseris glauca*	0.00	1.43	1	14	0	*	**
29. *Agoseris* sp.	0.00	1.43	1	14	0	*	**
30. *Androsace septentrionalis*	0.00	1.43	1	14	0	*	**
31. *Astragalus* sp.	0.00	1.43	1	14	0	*	**
32. *Carex* sp.	0.00	1.43	1	14	0	*	**
33. *Chenopodium fremontii*	0.00	1.43	1	14	0	*	**
34. *Crepis* sp.	0.00	1.43	1	14	0	*	**
35. *Delphinium* sp.	0.00	1.43	1	14	0	*	**
36. *Euphorbia* sp.	0.00	1.43	1	14	0	*	**
37. *Gutierrezia sarothrae*	0.00	1.43	1	14	0	*	**
38. *Lappula redowskii*	0.00	1.43	1	14	0	*	**
39. *Penstemon* sp.	0.00	1.43	1	14	0	*	**
40. *Phlox longifolia*	0.00	1.43	1	14	0	*	**
41. *Phlox multiflora*	0.00	1.43	1	14	0	*	**
42. *Senecio* sp.	0.00	1.43	1	14	0	*	**
43. Unknown Compositae	0.00	1.43	1	14	0	*	**
44. Unknown	0.00	2.86	**	**	0	*	**
All Species	2.41				241		

Table 2.3-13. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			JULY 1975 (SUMMARY OF 7 TRANSECTS)				
1. *Agropyron trachycaulum*	1.01	47.14	48	86	101	*	**
2. *Poa sandbergii*	0.71	12.86	14	71	71	*	**
3. *Oryzopsis hymenoides*	0.53	28.57	29	86	53	*	**
4. *Koeleria gracilis*	0.43	14.29	15	43	43	*	**
5. *Stipa comata*	0.41	14.29	15	57	41	*	**
6. *Agropyron smithii*	0.37	15.71	16	71	37	*	**
7. *Phlox hoodii*	0.34	30.00	30	86	34	0.2	1.6
8. *Haplopappus nuttallii*	0.34	18.57	19	71	34	0.7	2.2
9. *Cryptantha sericea*	0.31	32.86	33	100	31	1.3	1.5
10. *Sphaeralcea coccinea*	0.24	5.71	6	43	24	1.3	3.8
11. *Eriogonum lonchophyllum*	0.23	14.29	15	29	23	0.6	10.5
12. *Euphorbia fendleri*	0.21	17.14	17	43	21	0.5	3.2
13. *Sitanion longifolium*	0.10	7.14	7	43	10	*	**
14. *Agropyron inerme*	0.09	8.57	9	14	9	0.5	3.0
15. *Erigeron eatonii*	0.07	11.43	12	57	7	*	**
16. *Carex geyeri*	0.07	4.29	4	29	7	*	**
17. *Hymenopappus filifolius*	0.06	4.29	4	14	6	0.0	1.0
18. *Eriogonum umbellatum*	0.06	2.86	3	14	6	0.1	2.0
19. *Astragalus diversifolius*	0.04	4.29	4	43	4	0.1	1.3
20. *Penstemon caespitosus*	0.04	4.29	4	29	4	0.1	1.3
21. *Trifolium gymnocarpon*	0.03	11.43	11	29	3	0.2	2.1
22. *Gutierrezia sarothrae*	0.03	2.86	3	29	3	0	1.0
23. *Streptanthus cordatus*	0.03	1.43	1	14	3	0	1.0

Table 2.3-13. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
24. *Balsamorhiza sagittata*	0.03	1.43	1	14	3	0	1.0
25. *Castilleja linariaefolia*	0.03	1.43	1	14	3	0	1.0
26. *Arenaria eastwoodiae*	0.01	5.71	6	29	1	0.1	2.5
27. *Ipomopsis congesta*	0.01	4.29	4	14	1	0.1	1.3
28. *Agoseris glauca*	0.01	4.29	4	14	1	0.1	1.3
29. *Chenopodium fremontii*	0.01	2.86	3	29	1	0.1	2.5
30. *Astragalus spatulatus*	0.01	1.43	1	14	1	0.1	7.0
31. *Crepis acuminata*	0.01	1.43	1	14	1	0	2.0
32. *Senecio multilobatus*	0.01	1.43	1	14	1	0.1	5.0
33. *Physaria floribunda*	0.00	8.57	9	43	0	0.1	1.5
34. *Astragalus chamaeleuce*	0.00	4.29	4	29	0	0.1	1.3
35. *Phlox longifolia*	0.00	2.86	3	14	0	0.1	3.5
36. *Antennaria microphylla*	0.00	1.43	1	14	0	0	1.0
37. *Astragalus purshii*	0.00	1.43	1	14	0	0	2.0
38. *Chaenactis douglasii*	0.00	1.43	1	14	0	0	1.0
39. *Lygodesmia juncea*	0.00	1.43	1	14	0	*	**
All Species	5.93				593		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-14. Species encountered in the shrub-tree seedling stratum in the pinyon-juniper type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
OCTOBER 1974 (SUMMARY OF 26 TRANSECTS)									
1. *Artemisia tridentata*	4.11	84.62	88	100	0.36	411	2519	*	**
2. *Pinus edulis*	0.88	62.50	63	80	0.81	88	245	*	**
3. *Cercocarpus montanus*	0.69	14.42	15	23	0.98	69	64	*	**
4. *Amelanchier utahensis*	0.65	22.12	23	38	0.44	65	216	*	**
5. *Purshia tridentata*	0.58	24.04	25	50	0.47	58	76	*	**
6. *Atriplex confertifolia*	0.44	8.65	9	23	0.49	43	123	*	**
7. *Juniperus osteosperma*	0.27	33.65	34	69	0.71	27	75	*	**
8. *Symphoricarpos oreophilus*	0.21	12.50	13	23	0.37	21	65	*	**
9. *Chrysothamnus* sp.	0.16	13.46	14	23	0.27	15	75	*	**
10. *Chrysothamnus viscidiflorus*	0.12	16.35	16	38	0.46	12	156	*	**
11. *Chrysothamnus nauseosus*	0.10	18.27	18	19	0.27	10	118	*	**
12. *Tetradymia canescens*	0.04	2.88	3	8	0.60	4	21	*	**
13. *Eurotia lanata*	0.00	1.92	2	4	0.00	0	7	*	**
14. *Ephedra viridis*	0.00	0.96	1	4	0.00	1	1	*	**
15. *Sorbus scopulina*	0.00	0.96	1	4	0.00	0	1	*	**
All Species	8.25					825	3760		
MAY-JUNE (SUMMARY OF 13 TRANSECTS)									
1. *Artemisia tridentata*	4.95	89.33	94	100	0.45	495	1777	0.08	142
2. *Amelanchier utahensis*	1.44	34.67	36	60	0.62	144	349	0.40	140
3. *Pinus edulis*	1.13	65.33	66	93	0.70	113	281	0.36	101

Table 2.3-14. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
4. Purshia tridentata	0.90	44.00	45	60	0.54	90	222	0.03	7
5. Cercocarpus montanus	0.40	25.33	26	40	0.43	40	112	0.19	21
6. Chrysothamnus viscidiflorus	0.21	26.67	27	47	0.45	21	187	0.08	15
7. Symphoricarpos oreophilus	0.14	21.33	21	47	0.21	14	57	0.03	2
8. Juniperus osteosperma	0.12	42.67	43	73	0.46	12	87	0.06	5
9. Chrysothamnus nauseosus	0.05	24.00	24	60	0.16	5	131	0.00	**
10. Atriplex confertifolia	0.05	2.67	3	7	0.77	5	14	0.14	2
11. Tetradymia canescens	0.03	14.67	15	47	0.12	3	46	0.01	**
12. Opuntia fragilis	0.01	6.67	7	13	0.14	1	21	0.00	**
13. Ceanothus martini	0.01	2.67	3	7	0.22	1	2	0.00	**
14. Opuntia polyacantha	0.00	17.33	17	47	0.00	0	37	0.00	**
All Species	9.44					944	3323		
JULY 1975 (SUMMARY OF 6 TRANSECTS)									
1. Amelanchier utahensis	5.17	60.00	65	75	0.54	517	992	*	**
2. Artemisia tridentata	2.82	65.00	68	100	0.21	282	1325	*	**
3. Purshia tridentata	1.40	50.00	51	75	0.43	140	371	*	**
4. Cercocarpus montanus	1.32	40.00	41	75	0.48	132	371	*	**
5. Pinus edulis	1.09	80.00	81	100	0.48	109	383	*	**
6. Symphoricarpos oreophilus	0.52	35.00	36	75	0.14	52	529	*	**
7. Juniperus osteosperma	0.42	35.00	35	75	0.34	42	88	*	**

Table 2.3-14. (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
8. Opuntia polyacantha	0.11	10.00	10	50	0.22	11	21	*	**
9. Chrysothamnus viscidiflorus	0.01	10.00	10	25	0.03	1	29	*	**
10. Opuntia fragilis	0.00	20.00	20	25	0.00	0	75	*	**
11. Chrysothamnus nauseosus	0.00	10.00	10	50	0.00	0	13	*	**
All Species	12.86					1286	4197		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

2.3.1.3.4.3 Mature Tree Stratum (Table 2.3-15)

Pinyon pine (Pinus edulis) and Utah juniper (Juniperus osteosperma) were the only tree species encountered in this type. Both species contributed 23 percent cover in the May-June transects and 29 percent cover for the July transects. In the June transects, the two species appear to be co-dominant, with Pinus edulis providing a relative cover of 55 percent. Pinus edulis was the dominant species in the July transects, providing a relative cover of 72 percent. Mature trees occurred at a density of 0.27 individuals per 10 m^2 in the May-June transects, and 0.25 trees per 10 m^2 in the July transects. Juniperus osteosperma was the most abundant species in the May-June transects, with a density of 0.15 individuals per 10 m^2, and Pinus edulis the most abundant in the July transects, with a density of 0.15 individuals per 10 m^2.

Mature class Juniperus osteosperma ranged in size from 7.6 cm to 103 cm in diameter, measured below branch point (Table 2.3- 6). Fifty-one percent of the mature trees possessed diameters greater than 28 cm. When the mature and tree seedling classes are combined, 39 percent of all individuals sampled fall within the seedling-sapling class (less than 7.6 cm diameter).

Mature class Pinus edulis ranged in size from 7.6 cm to 68 cm diameter, measured below branch point (Table 2.3- 6). Fifty-one percent of the mature trees possessed diameters greater than 20 cm.

The 7.6 to 12.0 cm size class contained the largest number of individuals (31), and accounted for 22 percent of all mature trees. When the mature and tree seedling classes are combined, 68 percent of all trees occur in the seedling-sapling class (less than 7.6 cm diameter). The larger number of individuals in the smallest size class suggests that Pinus edulis is reproducing more successfully than Juniperus osteosperma on the sampled transects.

2.3.1.3.5 Sagebrush

During the summer quarter, the sagebrush type was sampled with 7 permanent and 12 non-permanent transects. Shrub and tree strata were measured on all transects. Seventy, 0.5 m^2 quadrats were used to sample the herbaceous stratum on the 7 permanent transects. Each quadrat was sampled in June, and again in July. Three strata and 92 species were identified for the sagebrush type: 2 species in the tree stratum, 16 species in the shrub stratum, and 76 species in the herbaceous stratum. Juniperus osteosperma and Pinus edulis were found in both the shrub and mature tree strata.

Table 2.3-15. Species encountered in the mature tree stratum in the pinyon-juniper type for RBOSP

Species	Percent Cover	Percent Frequency	Cover m^2/ha	Density #/ha	Basal Area m^2/ha
	OCTOBER 1974 (SUMMARY OF 26 TRANSECTS)				
1. *Juniperus osteosperma*	14.02	69.23	1402	224	30.47
2. *Pinus edulis*	8.85	43.27	885	85	8.26
All Species	22.87		2287	309	
	MAY-JUNE 1975 (SUMMARY OF 15 TRANSECTS)				
1. *Pinus edulis*	12.37	62.67	1237	126	5.50
2. *Juniperus osteosperma*	10.28	74.67	1028	151	15.84
All Species	22.65		2265	277	
	JULY 1975 (SUMMARY OF 4 TRANSECTS)				
1. *Pinus edulis*	20.97	75.00	2097	150	67
2. *Juniperus osteosperma*	8.20	70.00	820	100	56
All Species	29.17		2917	250	

2.3.1.3.5.1 Herbaceous Stratum (Table 2.3-16)

Sixty-one species contributed 7 percent cover during the May-June sampling period. Dominant species were a perennial grass, *Poa* sp., a sedge, *Carex geyeri*, and a perennial forb, *Phlox hoodii*, together providing relative cover of 46 percent. Fourteen species of grasses and sedges contributed 55 percent of the total cover. Species encountered were primarily perennials, with very few spring ephemerals.

During July, 61 species contributed 17 percent cover. Dominant species were 2 grasses, *Poa sandbergii* and *Agropyron smithii*, and a sedge, *Carex geyeri*. The three species together contributed a relative cover of 22 percent. Seventy-four percent of the species found in the June quadrats were again encountered in July. Fifteen grass species contributed 47 percent of the total cover in July.

Frequency values are low for nearly all species for both sampling periods, indicating a dispersed and heterogeneous distribution of species. The very low constancy values indicate great variability among the sampling sites that have been included in this type.

2.3.1.3.5.2 Shrub Stratum (Table 2.3-17)

Fifteen species contributed a total cover of 32 percent during the May-June sampling period, and 10 species provided 40 percent cover in July. *Artemisia tridentata* was the dominant species on the transects sampled during both sampling periods, providing a relative cover of 84 percent in May-June, and 59 percent in July. Shrub stratum density was estimated at 1.2 individuals per m^2 for the May-June transects, and 1.9 individuals per m^2 for the July transects. Highest densities were recorded for *Artemisia tridentata*, with 0.87 and 0.79 individuals per m^2 for the May-June and July sampling periods. Mean volume values indicated that *Amelanchier utahensis* (2.17 m^3) and *Symphoricarpos oreophilus* (1.09 m^3) were the largest species occurring in the sagebrush type during the May-June sampling period.

2.3.1.3.5.3 Mature Tree Stratum (Table 2.3- 18)

Mature trees were found very infrequently in the transects sampled in the sagebrush type, and consisted of *Juniperus osteosperma* and *Pinus edulis*. Cover values were not recorded for either species. Tree stand density was 0.008 individuals per 10 m^2.

2.3.1.3.6 Bald [1]

During the summer quarter, the bald type was sampled with 2 permanent and 6 non-permanent transects. Shrub, tree, and herbaceous strata were sampled on all transects. Eighty, 0.5 m^2 quadrats were used to sample the herbaceous stratum on all transects. The 20 permanent

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[1] Formerly Upland Meadow

Table 2.3-16 Species encountered in the herbaceous stratum in the sagebrush type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad.	Sociability
			OCTOBER 1974 (SUMMARY OF 23 TRANSECTS)				
1. Poa sp.	1.66	25.65	27	52	166	*	**
2. Agropyron smithii	1.02	26.09	27	43	102	*	**
3. Bromus tectorum	0.70	6.96	8	22	70	*	**
4. Arenaria sp.	0.60	13.91	15	30	60	*	**
5. Agropyron trachycaulum	0.57	22.17	23	39	57	*	**
6. Koeleria gracilis	0.55	13.04	14	26	55	*	**
7. Stipa comata	0.54	6.09	7	17	54	*	**
8. Oryzopsis hymenoides	0.42	11.30	12	39	42	*	**
9. Lupinus sp.	0.36	9.57	10	30	36	*	**
10. Phlox hoodii	0.29	8.26	9	13	29	*	**
11. Penstemon caespitosus	0.27	7.83	8	30	27	*	**
12. Carex sp.	0.26	7.83	8	17	26	*	**
13. Moss	0.24	1.74	2	4	24	*	**
14. Poa sandbergii	0.22	3.48	4	4	22	*	**
15. Erigeron sp.	0.21	11.74	12	39	21	*	**
16. Hedysarum boreale	0.20	3.48	4	17	20	*	**
17. Gutierrezia sarothrae	0.15	6.52	7	30	15	*	**
18. Sitanion longifolium	0.14	4.78	5	22	14	*	**
19. Haplopappus nuttallii	0.13	6.09	6	22	13	*	**
20. Oxytropis lambertii	0.11	2.17	2	9	11	*	**
21. Eriogonum sp.	0.09	3.48	4	13	9	*	**
22. Stipa sp.	0.09	1.74	2	9	9	*	**

Table 2.3-16 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad.	Sociability
23. Cryptantha sericea	0.07	3.04	3	26	7	*	**
24. Lepidium sp.	0.07	2.17	2	4	7	*	**
25. Astragalus sp.	0.06	3.48	4	22	6	*	**
26. Penstemon sp.	0.06	2.17	2	9	6	*	**
27. Physaria floribunda	0.05	3.91	4	22	5	*	**
28. Balsamorhiza sagittata	0.05	0.43	0	4	5	*	**
29. Aster sp.	0.03	2.61	3	13	3	*	**
30. Ipomopsis sp.	0.03	2.17	2	22	3	*	**
31. Elymus cinereus	0.03	1.30	1	4	3	*	**
32. Penstemon strictus	0.03	1.30	1	9	3	*	**
33. Agropyron spicatum	0.03	0.43	0	4	3	*	**
34. Sphaeralcea coccinea	0.02	3.04	3	17	2	*	**
35. Chenopodium sp.	0.02	0.87	1	4	2	*	**
36. Bouteloua gracilis	0.01	0.87	1	4	1	*	**
37. Elymus sp.	0.01	0.43	0	4	1	*	**
38. Eriogonum ovalifolium	0.01	0.43	0	4	0	*	**
39. Descurainia sp.	0.00	0.43	0	4	0	*	**
40. Lithospermum sp.	0.00	0.43	0	4	0	*	**
41. Senecio sp.	0.00	0.43	0	4	0	*	**
42. Townsendia incana	0.00	0.43	0	4	0	*	**
43. Trifolium gymnocarpon	0.00	0.43	0	4	0	*	**
44. Unknown Gramineae	1.96	17.17	18	**	196	*	**
45. Unknown Crucifereae	0.01	1.74	2	**	1	*	**
All Species	11.38				1138		

Table 2.3-16 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			MAY-JUNE 1975 (SUMMARY OF 7 TRANSECTS)				
1. *Poa* sp.	1.31	32.86	34	86	131	*	**
2. *Phlox hoodii*	1.06	5.71	7	14	106	*	**
3. *Carex geyeri*	0.90	10.00	11	14	90	*	**
4. *Lupinus* sp.	0.51	15.71	16	43	51	*	**
5. *Agropyron smithii*	0.44	14.29	15	43	44	*	**
6. *Oryzopsis hymenoides*	0.27	20.00	20	43	27	*	**
7. *Agropyron* sp.	0.26	35.71	36	71	26	*	**
8. *Elymus cinereus*	0.26	8.57	9	14	26	*	**
9. *Phlox multiflora*	0.24	11.43	12	28	24	*	**
10. *Penstemon* sp.	0.23	15.71	16	28	23	*	**
11. *Trifolium gymnocarpon*	0.14	17.14	17	28	14	*	**
12. *Koeleria gracilis*	0.11	12.86	13	43	11	*	**
13. *Descurainia richardsonii*	0.11	11.48	12	14	11	*	**
14. *Cryptantha sericea*	0.11	7.14	7	28	11	*	**
15. *Eriogonum umbellatum*	0.11	5.71	6	14	11	*	**
16. *Carex* sp.	0.11	4.29	4	14	11	*	**
17. *Erigeron* sp.	0.09	17.14	17	28	9	*	**
18. *Senecio multilobatus*	0.09	5.71	6	14	9	*	**
19. *Hedysarum boreale*	0.09	2.86	3	28	9	*	**
20. *Stipa* sp.	0.08	8.57	9	43	8	*	**
21. *Hordeum jubatum*	0.07	1.43	2	14	7	*	**
22. *Poa sandbergii*	0.05	4.29	4	14	5	*	**
23. *Solidago* sp.	0.04	11.43	11	28	4	*	**

Table 2.3-16 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
24. Lomatium sp.	0.03	12.86	13	28	3	*	**
25. Bromus sp.	0.03	2.86	3	14	3	*	**
26. Viola nuttallii	0.03	2.86	3	14	3	*	**
27. Phlox longifolia	0.02	8.57	8	28	2	*	**
28. Lepidium montanum	0.02	2.86	3	14	2	*	**
29. Senecio sp.	0.02	2.86	3	28	2	*	**
30. Haplopappus nuttallii	0.02	1.43	1	14	2	*	**
31. Castilleja chromosa	0.01	10.00	10	28	1	*	**
32. Crepis acuminata	0.01	7.14	7	14	1	*	**
33. Sitanion longifolium	0.01	7.14	7	28	1	*	**
34. Taraxacum officinale	0.01	4.28	4	28	1	*	**
35. Eriogonum ovalifolium	0.01	1.43	1	14	1	*	**
36. Euphorbia robusta	0.01	1.43	1	14	1	*	**
37. Haplopappus acaulis	0.01	1.43	1	14	1	*	**
38. Poa cusickii	0.01	1.43	1	14	1	*	**
39. Sisymbrium sp.	0.00	14.29	14	57	0	*	**
40. Chenopodium fremonti	0.00	7.14	7	14	0	*	**
41. Sphaeralcea coccinea	0.00	5.72	6	43	0	*	**
42. Agoseris glauca	0.00	4.29	4	28	0	*	**
43. Phlox sp.	0.00	4.29	4	14	0	*	**
44. Astragalus sp.	0.00	2.86	3	28	0	*	**
45. Bromus tectorum	0.00	2.86	3	28	0	*	**
46. Calochortus sp.	0.00	2.86	3	14	0	*	**

Table 2.3-16 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
47. Delphinium nelsonii	0.00	4.29	4	28	0	*	**
48. Festuca sp.	0.00	2.86	3	14	0	*	**
49. Oenothera sp.	0.00	2.86	3	14	0	*	**
50. Zygadenus venenosus	0.00	2.86	3	14	0	*	**
51. Androsace septentrionalis	0.00	1.43	1	14	0	*	**
52. Claytonia sp.	0.00	1.43	1	14	0	*	**
53. Cymopterus sp.	0.00	1.43	1	14	0	*	**
54. Geranium sp.	0.00	1.43	1	14	0	*	**
55. Ipomopsis sp.	0.00	1.43	1	14	0	*	**
56. Kochia iranica	0.00	1.43	1	14	0	*	**
57. Lepidium sp.	0.00	1.43	1	14	0	*	**
58. Mertensia sp.	0.00	1.43	1	14	0	*	**
59. Physaria sp.	0.00	*	1	*	0	*	**
60. Physaria floribunda	0.00	2.86	1	28	0	*	**
61. Plantago sp.	0.00	1.43	1	14	0	*	**
62. Sisymbrium altissimum	0.00	1.43	1	14	0	*	**
Unknown	0.16	12.86	**	**	16	*	**
All Species	7.09				709		

Table 2.3-16 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			JULY 1975 (SUMMARY OF 7 TRANSECTS)				
1. *Lupinus caudatus*	2.47	30.00	32	43	247	0.8	2.8
2. *Poa sandbergii*	1.96	30.00	32	43	196	*	**
3. *Carex geyeri*	1.67	12.86	14	14	167	*	**
4. *Agropyron smithii*	1.24	38.57	40	86	124	0.0	0.1
5. *Phlox multiflora*	0.77	5.71	6	14	77	0.3	5.5
6. *Galium boreale*	0.70	12.86	14	14	70	2.9	22.4
7. *Elymus cinereus*	0.70	7.14	8	14	70	*	**
8. *Stipa columbiana*	0.59	12.86	13	14	59	*	**
9. *Penstemon caespitosus*	0.51	14.29	15	14	51	0.7	4.7
10. *Trifolium gymnocarpon*	0.44	22.86	23	29	44	1.2	5.2
11. *Poa fendleriana*	0.44	12.86	13	43	44	*	**
12. *Oryzopsis hymenoides*	0.41	15.71	16	43	41	*	**
13. *Eriogonum umbellatum*	0.40	10.00	10	14	40	0.6	5.6
14. *Sitanion longifolium*	0.36	17.14	18	43	36	*	**
15. *Hedysarum boreale*	0.36	1.43	2	14	36	0.0	2.0
16. *Phlox hoodii*	0.31	11.43	12	28	31	0.3	2.9
17. *Stipa comata*	0.30	11.43	12	43	30	*	**
18. *Geranium richardsonii*	0.30	8.57	9	14	30	0.2	2.0
19. *Erigeron eatonii*	0.27	22.86	23	43	27	0.8	3.6
20. *Phlox longifolia*	0.26	30.00	30	57	26	1.4	4.7
21. *Lepidium perfoliatum*	0.24	12.86	13	14	24	0.9	7.2
22. *Sphaeralcea coccinea*	0.21	15.71	16	43	21	0.7	4.2
23. *Erigeron speciosus*	0.20	4.29	4	14	20	0.8	18.7

Table 2.3-16 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
24. Comandra umbellata	0.20	4.29	4	14	20	0.4	8.3
25. Cryptantha sericea	0.17	14.29	14	57	17	0.5	3.8
26. Crepis acuminata	0.17	12.86	13	29	17	0.3	2.0
27. Penstemon fremontii	0.16	7.14	7	29	16	0.1	1.8
28. Chenopodium fremontii	0.11	15.71	16	57	11	0.8	5.1
29. Astragalus tenellus	0.11	5.71	6	14	11	0.1	2.2
30. Castilleja chromosa	0.09	7.14	7	29	9	0.1	1.2
31. Poa pratensis	0.09	2.86	3	14	9	*	**
32. Achillea lanulosa	0.07	4.29	4	14	7	0.2	4.3
33. Bromus tectorum	0.07	2.86	3	29	7	*	**
34. Agoseris glauca	0.06	10.00	10	29	6	0.2	2.3
35. Erigeron pumilus	0.06	4.29	4	29	6	0.1	1.3
36. Helianthella uniflora	0.06	2.86	3	14	6	0.1	4.5
37. Koeleria gracilis	0.04	4.29	4	29	4	*	**
38. Agropyron sp.	0.04	1.43	1	14	4	*	**
39. Agropyron trachycaulum	0.03	11.43	11	43	3	*	**
40. Osmorhiza depauperata	0.03	1.43	1	14	3	0.0	2.0
41. Chenopodium leptophyllum	0.01	12.86	13	29	1	0.3	2.6
42. Erysimum asperum	0.01	7.14	7	43	1	0.1	1.4
43. Descurainia pinnata	0.01	5.71	6	29	1	0.2	3.7
44. Taraxacum officinale	0.01	5.71	6	29	1	0.1	2.0
45. Astragalus chamaeleuce	0.01	4.29	4	14	1	0.1	1.3
46. Ipomopsis aggregata	0.01	4.29	4	29	1	0.1	1.7

Table 2.3-16 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad.	Sociability
47. Physaria floribunda	0.01	4.29	4	43	1	0.1	1.7
48. Ipomopsis congesta	0.01	2.86	3	14	1	0.0	1.0
49. Zygadenus venenosus	0.01	2.86	3	14	1	0.0	1.0
50. Calochortus nuttallii	0.01	1.43	1	14	1	0.0	1.0
51. Haplopappus nuttallii	0.01	1.43	1	14	1	0.0	1.0
52. Kochia iranica	0.01	1.43	1	14	1	0.0	1.0
53. Lappula redowskii	0.00	5.71	6	29	0	0.1	1.0
54. Astragalus diversifolius	0.00	2.86	3	14	0	0.0	1.0
55. Astragalus purshii	0.00	1.43	1	14	0	0.0	1.0
56. Collomia linearis	0.00	1.43	1	14	0	0.0	1.0
57. Eriogonum ovalifolium	0.00	1.43	1	14	0	0.0	1.0
58. Euphorbia fendleri	0.00	1.43	1	14	0	0.0	**
59. Polygonum sawatchense	0.00	1.43	1	14	0	0.0	1.0
60. Senecio multilobatus	0.00	1.43	1	14	0	0.0	1.0
All Species	16.89				1689		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-17 Species encountered in the shrub-tree seedling stratum in the sagebrush type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
OCTOBER 1974 (SUMMARY OF 23 TRANSECTS)									
1. Artemisia tridentata	24.11	100.00	124	100	0.49	2411	10595	*	**
2. Chrysothamnus viscidiflorus	1.19	23.91	25	30	0.37	119	510	*	**
3. Amelanchier utahensis	1.14	32.61	34	39	0.56	114	316	*	**
4. Chrysothamnus sp.	0.84	36.96	38	43	0.20	84	786	*	**
5. Atriplex confertifolia	0.58	13.04	14	17	0.38	58	244	*	**
6. Sarcobatus vermiculatus	0.51	18.48	19	22	0.37	51	198	*	**
7. Chrysothamnus nauseosus	0.32	16.30	16	22	0.30	32	152	*	**
8. Symphoricarpos oreophilus	0.20	22.83	23	35	0.17	20	226	*	**
9. Pinus edulis	0.13	22.83	23	43	0.47	13	46	*	**
10. Eurotia lanata	0.13	17.39	18	22	0.19	13	202	*	**
11. Purshia tridentata	0.09	11.96	12	22	0.43	9	31	*	**
12. Juniperus osteosperma	0.07	18.48	19	39	0.50	7	36	*	**
13. Tetradymia canescens	0.02	6.52	6	13	0.11	2	83	*	**
14. Atriplex canescens	0.01	8.70	9	9	0.10	1	29	*	**
All Species	29.34					2934	13454		
MAY-JUNE 1975 (SUMMARY OF 7 TRANSECTS)									
1. Artemisia tridentata	26.70	98.46	125	100	0.42	2670	8785	0.20	1757
2. Symphoricarpos oreophilus	1.48	41.54	43	54	0.32	148	618	1.09	674
3. Amelanchier utahensis	0.99	30.77	32	31	0.64	99	309	2.17	671
4. Chrysothamnus nauseosus	0.94	13.85	15	15	0.58	94	285	0.73	208
5. Chrysothamnus viscidiflorus	0.77	69.23	70	85	0.18	76	1329	0.01	13
6. Sarcobatus vermiculatus	0.62	10.77	11	15	0.43	62	187	0.14	26
7. Purshia tridentata	0.07	6.15	6	8	0.48	7	10	0.00	0
8. Atriplex confertifolia	0.06	7.69	8	8	0.37	6	62	0.00	0

Table 2.3-17 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
9. Juniperus osteosperma	0.04	6.15	6	8	0.26	4	10	0.00	0
10. Eurotia lanata	0.04	4.62	5	8	0.26	4	26	0.00	0
11. Opuntia polyacantha	0.03	16.92	17	38	0.11	3	64	0.01	1
12. Tetradymia canescens	0.02	20.00	20	23	0.08	3	149	0.00	0
13. Pinus edulis	0.02	7.69	8	15	0.28	2	9	0.00	0
14. Atriplex canescens	0.01	3.08	3	15	0.28	1	6	0.00	0
15. Rosa woodsii	0.00	1.54	2	8	**	0	2	*	**
Unknown shrub	0.02	1.54	2	8	0.08	2	4	0.00	0
All Species	31.82					3182	11855		
				JULY 1975 (SUMMARY OF 6 TRANSECTS)					
1. Artemisia tridentata	23.28	100.00	123	100	0.29	2328	7994	*	**
2. Symphoricarpos oreophilus	7.55	56.67	64	67	0.39	755	2467	*	**
3. Chrysothamnus viscidiflorus	3.66	96.67	100	100	0.15	366	6553	*	**
4. Chrysothamnus nauseosus	2.36	33.33	36	33	0.20	236	1064	*	**
5. Amelanchier utahensis	2.24	40.00	42	67	0.58	223	364	*	**
6. Purshia tridentata	0.53	16.67	17	33	0.45	53	108	*	**
7. Juniperus osteosperma	0.08	23.33	23	50	0.12	8	50	*	**
8. Pinus edulis	0.05	23.33	23	67	0.29	5	25	*	**
9. Tetradymia canescens	0.00	3.33	3	17	**	0	17	*	**
10. Ribes cereum	0.00	3.33	3	17	**	0	6	*	**
All Species	39.74					3974	18647		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-18. Species encountered in the mature tree stratum in the sagebrush type for RBOSP

Species	Percent Cover	Percent Frequency	Cover m^2/ha	Density #/ha	Basal Area m^2/ha
	JULY 1975 (SUMMARY OF 6 TRANSECTS)				
1. *Juniperus osteosperma*	.00	6.67	.00	5.56	.94
2. *Pinus edulis*	.00	3.33	.00	2.78	.17
All Species	.00		.00	8.33	1.11

quadrats were sampled in May-June and again in July. Two strata and 70 species were identified for the bald type: 10 species in the shrub stratum, 60 species in the herbaceous stratum.

2.3.1.3.6.1 Herbaceous Stratum (Table 2.3-19)

Forty-three species contributed 9 percent cover in the quadrats sampled in June. Two species of perennial grasses, Agropyron trachycaulum and Koeleria gracilis shared dominance, providing a relative cover of 29 percent. Eight species of grasses and sedges contributed 40 percent of the total herbaceous cover.

During July, 46 species contributed 21 percent cover. Dominant species were two perennial grasses, Agropyron trachycaulum, Koeleria gracilis, and a perennial forb, Astragalus spatulatus, together providing a relative cover of 28 percent. Nine species of grasses and sedges contributed 38 percent of the total cover. Sixty-eight percent of the species encountered in the May-June transects were found again in the July transects. Density and frequency values are low for all forb species, indicating a dispersed and heterogeneous distribution of this group.

2.3.1.3.6.2 Shrub Stratum (Table 2.3- 20)

Seven species contributed a total cover of 1 percent in the May-June transects, and 8 species contributed 1 percent cover in July. Artemisia tridentata and Amelanchier utahensis were the dominant species for both sampling periods, together providing a relative cover of 64 percent in May-June, and 59 percent in July. Shrub stratum density was estimated at 0.15 individuals per m^2 for May-June transects, and 0.14 individuals per m^2 for July sites. The most abundant species were Chrysothamnus depressus (0.04 individuals per m^2) in May-June, and Tetradymia canescens (0.07 individuals per m^2 in July).

Mean volume data indicate that the largest species were Amelanchier utahensis (10.89 m^3) and Pinus edulis (4.19 m^3). The very small size of Artemisia tridentata (0.01 m^3) and Purshia tridentata (0.05 m^3) may be related to the severe environmental conditions that exist on these exposed slopes, and heavy browsing by large herbivores.

2.3.1.3.6.3 Mature Tree Stratum (Table 2.3- 21)

Mature class trees were not encountered in the bald type during the summer quarter.

Table 2.3-19 Species encountered in the herbaceous stratum in the bald type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. Agropyron trachycaulum	5.68	85.00	91	100	568	*	**
2. Poa sp.	4.67	90.00	95	100	467	*	**
3. Haplopappus nuttallii	3.72	82.50	86	100	372	*	**
4. Eriogonum sp.	1.92	37.50	39	75	192	*	**
5. Penstemon caespitosus	1.39	50.00	51	75	139	*	**
6. Arenaria sp.	0.75	77.50	78	75	75	*	**
7. Hedysarum boreale	0.74	20.00	21	75	74	*	**
8. Hymenoxys acaulis	0.71	67.50	68	100	71	*	**
9. Gutierrezia sarothrae	0.64	40.00	41	100	64	*	**
10. Koeleria gracilis	0.57	45.00	46	100	57	*	**
11. Phlox sp.	0.44	10.00	10	25	44	*	**
12. Oxytropis lambertii	0.30	27.50	28	50	30	*	**
13. Astragalus sp.	0.09	20.00	20	75	9	*	**
14. Androsace septentrionalis	0.09	17.50	18	50	9	*	**
15. Penstemon sp.	0.08	12.50	13	25	8	*	**
16. Cryptantha sericea	0.06	7.50	8	50	6	*	**
17. Eriogonum alatum	0.06	7.50	8	50	6	*	**
18. Physaria floribunda	0.04	12.50	13	50	4	*	**
19. Erigeron sp.	0.04	5.00	5	50	4	*	**
20. Oryzopsis hymenoides	0.03	2.50	3	25	3	*	**
21. Sphaeralcea coccinea	0.02	2.50	3	25	2	*	**
Unknown Cruciferceae	0.02	2.50	3	25	2	*	**
All Species	21.99				2199		

Table 2.3-19 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
MAY-JUNE 1975 (SUMMARY OF 5 TRANSECTS)							
1. Agropyron sp.	1.29	92.00	93	100	129	*	**
2. Koeleria gracilis	1.26	64.00	65	80	126	*	**
3. Haplopappus acaulis	0.74	14.00	15	20	74	*	**
4. Astragalus spatulatus	0.61	34.00	35	20	61	*	**
5. Penstemon caespitosus	0.58	48.00	49	80	58	*	**
6. Poa sandbergii	0.51	34.00	35	40	51	*	**
7. Haplopappus nuttallii	0.47	58.00	54	80	47	*	**
8. Gutierrezia sarothrae	0.43	44.00	44	100	43	*	**
9. Poa sp.	0.36	54.00	54	60	36	*	**
10. Trifolium gymnocarpon	0.34	36.00	36	100	34	*	**
11. Phlox multiflora	0.26	10.00	10	40	26	*	**
12. Artemisia frigida	0.24	34.00	34	60	24	*	**
13. Hymenoxys acaulis	0.23	46.00	46	20	23	*	**
14. Hedysarum boreale	0.18	16.00	16	60	18	*	**
15. Phlox longifolia	0.12	54.00	54	80	12	*	**
16. Antennaria sp.	0.12	8.00	8	40	2	*	**
17. Lomatium orientale	0.08	40.00	40	80	8	*	**
18. Eriogonum lonchophyllum	0.08	28.00	28	80	8	*	**
19. Kochia iranica	0.05	12.00	12	20	5	*	**
20. Stipa sp.	0.05	8.00	8	40	5	*	**
21. Arenaria eastwoodiae	0.04	12.00	12	20	4	*	**
22. Artemisia sp.	0.04	8.00	8	20	4	*	**
23. Arenaria fendleri	0.04	4.00	4	20	4	*	**

Table 2.3-19 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
24. *Physaria floribunda*	0.03	24.00	24	80	3	*	**
25. *Eriogonum umbellatum*	0.02	6.00	6	20	2	*	**
26. *Ipomopsis* sp.	0.02	4.00	4	20	2	*	**
27. *Carex* sp.	0.02	2.00	2	20	2	*	**
28. *Lupinus* sp.	0.02	2.00	2	20	2	*	**
29. *Townsendia incana*	0.02	2.00	2	20	2	*	**
30. *Cymopterus fendleri*	0.01	22.00	22	40	1	*	**
31. *Linum lewisii*	0.01	2.00	2	20	1	*	**
32. *Sitanion longifolium*	0.00	10.00	10	20	0	*	**
33. *Calochortus* sp.	0.00	8.00	8	20	0	*	**
34. *Castilleja chromosa*	0.00	6.00	6	20	0	*	**
35. *Erigeron* sp.	0.00	6.00	6	60	0	*	**
36. *Lomatium juniperum*	0.00	6.00	6	20	0	*	**
37. *Cryptantha sericea*	0.00	4.00	4	20	0	*	**
38. *Zycadenus venenosus*	0.00	4.00	4	40	0	*	**
39. *Agropyron smithii*	0.00	2.00	2	20	0	*	**
40. *Crepis acuminata*	0.00	2.00	2	20	0	*	**
41. *Delphinium nelsonii*	0.00	2.00	2	20	0	*	**
42. *Solidago* sp.	0.00	2.00	2	20	0	*	**
43. *Sphaeratcea coccinea*	0.00	2.00	2	20	0	*	**
Unknown	0.24	34.00	**	*	24	*	**
All Species	8.77				877		

Table 2.3-19 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad.	Sociability
JULY 1975 (SUMMARY OF 5 TRANSECTS)							
1. Agropyron trachycaulum	2.14	70.00	72	80	214	*	**
2. Koeleria gracilis	1.96	56.00	58	100	196	*	**
3. Astragalus spatulatus	1.73	64.00	66	100	173	3.8	5.9
4. Penstemon caespitosus	1.54	74.00	76	100	154	2.9	3.9
5. Hymenopappus filifolius	1.48	20.00	21	20	148	1.0	4.8
6. Poa sandbergii	1.46	64.00	66	100	146	*	**
7. Hymenoxys acaulis	1.30	68.00	69	100	130	4.9	7.1
8. Haplopappus acaulis	1.02	20.00	21	40	102	0.9	4.7
9. Stipa comata	0.96	34.00	35	60	96	*	**
10. Agropyron smithii	0.90	24.00	25	60	90	*	**
11. Haploppapus nuttallii	0.84	52.00	53	100	84	2.4	4.6
12. Eriogonum lonchophyllum	0.72	36.00	37	100	72	0.8	2.2
13. Artemisia frigida	0.54	42.00	43	60	54	0.9	2.1
14. Hedysarum boreale	0.50	14.00	14	40	50	0.4	3.0
15. Gutierrezia sarothrae	0.46	24.00	24	80	46	0.5	2.3
16. Trifolium gymnocarpon	0.36	28.00	28	80	36	0.6	2.1
17. Carex geyeri	0.30	4.00	4	20	30	*	**
18. Comandra umbellata	0.28	12.00	12	80	28	0.5	4.3
19. Phlox longifolia	0.26	44.00	44	100	26	2.1	4.8
20. Oxytropis lambertii	0.22	10.00	10	40	22	0.2	1.8
21. Astragalus chamaeleuce	0.21	44.00	44	100	21	0.7	1.6
22. Artemisia dracunculus	0.20	8.00	8	20	20	0.1	1.8

Table 2.3-19 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
23. Eriogonum alatum	0.18	10.00	10	20	18	0.2	2.2
24. Sphaeralcea coccinea	0.18	4.00	4	40	18	0.4	9.5
25. Linum lewisii	0.16	8.00	8	40	16	0.3	3.5
26. Poa fendleriana	0.16	4.00	4	20	16	*	**
27. Phlox hoodii	0.14	10.00	10	20	14	0.3	3.4
28. Arenaria eastwoodiae	0.12	16.00	16	20	12	0.5	3.1
29. Ipomopsis aggregata	0.12	10.00	10	40	12	0.5	4.5
30. Leptodactylon pungens	0.10	4.00	4	20	10	0.3	6.5
31. Castilleja linariaefolia	0.08	4.00	4	20	8	0.1	2.5
32. Physaria floribunda	0.06	42.00	42	100	6	0.8	2.0
33. Oryzopsis hymenoides	0.06	10.00	10	40	6	*	**
34. Oenothera lavandolaefolia	0.06	4.00	4	20	6	0.1	1.5
35. Erigeron eatonii	0.04	6.00	6	20	4	0.2	2.7
36. Castilleja chromosa	0.04	6.00	6	20	4	0.1	1.7
37. Bromus tectorum	0.02	2.00	2	20	2	*	**
38. Erigeron eatonii	0.02	2.00	2	20	2	0.0	1.0
39. Zygadenus venenosus	0.02	2.00	2	20	2	0.0	1.0
40. Streptanthus cordatus	0.01	6.00	6	20	1	0.1	1.7
41. Androsace septentrionalis	0.00	10.00	10	40	0	0.1	1.4
42. Euphorbia robusta	0.00	4.00	4	40	0	0.1	1.5
43. Astragalus purshii	0.00	4.00	4	20	0	0.0	1.0
44. Cryptantha sericea	0.00	4.00	4	40	0	0.0	1.0
45. Achillea lanulosa	0.00	2.00	2	20	0	0.1	3.0
46. Lupinus caudatus	0.00	2.00	2	20	0	0.0	1.0
All Species	21.01				2101		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-20 Species encountered in the shrub-tree seedling stratum in the bald type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)									
1. Artemisia tridentata	1.31	25.00	26	25	.31	131	403	*	**
2. Chrysothamnus viscidiflorus	0.00	12.50	12	25	.00	0	56	*	**
3. Pinus edulis	0.00	12.50	12	25	**	0	21	*	**
4. Amelanchier utahensis	0.00	6.25	6	25	**	0	35	*	**
All Species	1.31					131	514		
MAY-JUNE 1975 (SUMMARY OF 5 TRANSECTS)									
1. Amelanchier utahensis	0.62	4.00	5	20	3.11	62	3	10.89	33
2. Artemisia tridentata	0.25	40.00	40	80	0.32	25	37	0.01	0
3. Chrysothamnus depressus	0.17	40.00	40	60	0.14	17	366	*	**
4. Pinus edulis	0.15	4.00	4	20	0.75	15	13	4.19	54
5. Purshia tridentata	0.10	4.00	4	20	0.48	10	3	0.05	0
6. Tetradymia canescens	0.06	40.00	40	60	0.10	6	257	*	**
7. Symphoricarpos oreophilus	0.00	4.00	4	20	**	0	26	*	**
All Species	1.35					135	706		
JULY 1975 (SUMMARY OF 3 TRANSECTS)									
1. Artemisia tridentata	0.46	26.67	27	67	0.70	46	100	*	**
2. Amelanchier utahensis	0.41	26.67	27	67	0.31	41	117	*	**
3. Symphoricarpos oreophilus	0.26	13.33	14	33	0.20	26	28	*	**
4. Tetradymia canescens	0.21	46.67	47	67	0.16	21	689	*	**

Table 2.3-20 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
5. Chrysothamnus viscidiflorus	0.11	46.67	47	67	0.16	11	516	*	**
6. Pinus edulis	0.03	26.67	27	67	0.09	3	22	*	**
7. Eurotia lanata	0.00	13.33	13	67	**	0	17	*	**
8. Juniperus osteosperma	0.00	6.67	7	33	**	0	6	*	**
All Species	1.47					147	1494		

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[*] Value not recorded in the field because of sampling procedure or absence of species.

[**] Value cannot be calculated because of absence of data.

Table 2.3-21. Species encountered in the mature tree stratum in the bald type for RBOSP

Species	Percent Cover	Percent Frequency	Cover m^2/ha	Density #/ha	Basal Area m^2/ha
	OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. *Juniperus osteosperma*	.00	6.25	0	7	.40

2.3.1.3.7 Shadscale

During the summer quarter, the shadscale type was sampled with 2 permanent and 2 non-permanent transects. Shrub and tree strata were measured on all transects. Twenty, 0.5 m^2 quadrats were used to sample the herbaceous stratum on the 2 permanent transects. Each quadrat was sampled in May-June, and again in July. Three strata and 25 species were identified for the shadscale type: 1 species in the tree stratum, 11 species in the shrub stratum, and 12 species in the herbaceous stratum.

2.3.1.3.7.1 Herbaceous Stratum (Table 2.3-22)

Nine species contributed 1 percent cover during the May-June sampling period. Two perennial forbs, *Eriogonum lonchophyllum* and *Artemisia frigida* were the dominant species, contributing a relative cover of 54 percent. Two grass species provided a relative cover of 11 percent.

Nine species contributed 3 percent cover in quadrats sampled in July. *Eriogonum lonchophyllum* and *Haplopappus nuttallii* were the dominant species, contributing a relative cover of 69 percent. Sixty-six percent of the species encountered in June were found again in July. Two grass species contributed a relative cover of 14 percent. All species occurred at low densities and low frequencies.

2.3.1.3.7.2 Shrub Stratum (Table 2.3- 23)

Nine species contributed 17 percent cover on the May-June transects, and nine species contributed 7 percent cover on the July transects. *Artemisia tridentata* and *Atriplex confertifolia* were the dominant species for both sampling periods, together providing a relative cover of 88 percent for May-June, and 67 percent for July. Shrub stratum density was 0.55 individuals per m^2 in the May-June transects, and 0.53 individuals per m^2 for July. The most abundant species were *Atriplex confertifolia* (0.22 individuals per m^2) for the May-June transects, and *Tetradymia canescens* (0.15 individuals per m^2) for the July transects. Mean volume values indicate that *Sarcobatus vermiculatus* (0.70 m^3) and *Artemisia tridentata* (0.17 m^3) are the largest species occurring in the shadscale type during the May-June sampling period.

2.3.1.3.7.3 Mature Tree Stratum (Table 2.3- 24)

One tree species, *Juniperus osteosperma*, which provided 4.43 percent cover, and occurred at a density of 0.05 individuals per 10 m^2, was encountered on the May-June transects.

2.3.1.3.8 Greasewood

During the summer quarter, the greasewood type was sampled with 2 permanent and 4 non-permanent transects. Shrub and tree strata were

Table 2.3-22 Species encountered in the herbaceous stratum in the shadscale type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad.	Sociability
			OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. *Oryzopsis hymenoides*	0.87	22.50	23	75	87	*	**
2. *Eriogonum lonchophyllum*	0.59	30.00	31	100	59	*	**
3. *Gutierrezia sarothrae*	0.56	7.50	8	25	56	*	**
4. *Agropyron trachycaulum*	0.49	12.50	13	25	49	*	**
5. *Haplopappus nuttallii*	0.44	15.00	15	25	44	*	**
6. *Bromus tectorum*	0.30	5.00	5	50	30	*	**
7. *Phlox hoodii*	0.19	7.50	8	25	19	*	**
8. *Phlox* sp.	0.16	10.00	10	25	16	*	**
9. *Sitanion longifolium*	0.08	2.50	3	25	8	*	**
10. *Penstemon* sp.	0.02	5.00	5	25	2	*	**
11. *Cryptantha sericea*	0.01	5.00	5	25	1	*	**
12. *Cirsium* sp.	0.01	2.50	3	25	1	*	**
All Species	3.72				372		
			MAY-JUNE 1975 (SUMMARY OF 2 TRANSECTS)				
1. *Eriogonum umbellatum*	0.28	35.00	35	50	28	*	**
2. *Artemisia frigida*	0.10	20.00	20	100	10	*	**
3. *Haplopappus nuttallii*	0.08	25.00	25	50	8	*	**
4. *Oryzopsis hymenoides*	0.08	15.00	15	100	8	*	**
5. *Sitanion longifolium*	0.08	5.00	5	50	8	*	**
6. *Ipomopsis* sp.	0.05	10.00	10	50	5	*	**
7. *Phlox longifolia*	0.05	10.00	10	50	5	*	**
8. *Chemopodium fremontii*	0.00	15.00	15	50	0	*	**
9. *Oenothera caespitosa*	0.00	15.00	15	50	0	*	**
All Species	0.70				70		

Table 2.3-22 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			JULY 1975 (SUMMARY OF 2 TRANSECTS)				
1. Eriogonum lonchophyllum	1.20	40.00	41	50	120	2.9	7.3
2. Haplopappus nuttallii	0.55	20.00	21	50	55	0.3	1.3
3. Oryzopsis hymenoides	0.25	25.00	25	100	25	*	**
4. Chenopodium fremontii	0.20	25.00	25	50	20	1.2	4.6
5. Sphaeralcea coccinea	0.15	10.00	10	50	15	0.7	7.0
6. Oenothera caespitosa	0.10	15.00	15	50	10	0.2	1.0
7. Sitanion longifolium	0.10	10.00	10	100	10	*	**
8. Arenaria eastwoodiae	0.00	5.00	5	50	0	0.1	1.0
9. Cryptantha sericea	0.00	5.00	5	50	0	0.1	1.0
All Species	2.55				255		

*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-23 Species encountered in the shrub-tree seedling stratum in the shadscale type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
			OCTOBER 1974 (SUMMARY OF 7 TRANSECTS)						
1. Chrysothamnus viscidiflorus	5.29	68.75	74	75	0.47	529	2340	*	**
2. Chrysothamnus nauseosus	3.67	68.75	72	75	0.49	367	833	*	**
3. Atriplex confertifolia	3.54	87.50	91	100	0.29	354	1931	*	**
4. Artemisia tridentata	1.91	62.50	64	100	0.51	191	917	*	**
5. Artemisia frigida	1.13	50.00	51	75	0.18	113	2229	*	**
6. Amelanchier utahensis	0.29	6.25	7	25	0.70	29	28	*	**
7. Sarcobatus vermiculatus	0.13	12.50	13	25	0.30	13	76	*	**
8. Tetradymia canescens	0.00	18.75	19	50	**	0	69	*	**
9. Pinus edulis	0.00	6.25	6	25	**	0	7	*	**
10. Rhus trilobata	0.00	6.25	6	25	**	0	7	*	**
All Species	15.95					1595	8438		
			MAY-JUNE 1975 (SUMMARY OF 3 TRANSECTS)						
1. Artemisia tridentata	11.88	100.00	112	100	0.59	1188	2000	0.17	340
2. Atriplex confertifolia	3.02	93.33	96	100	0.26	302	2289	0.01	23
3. Pinus edulis	0.75	26.67	27	67	1.13	75	33	*	**
4. Chrysothamnus viscidiflorus	0.64	53.33	54	100	0.24	64	428	0.01	4
5. Atriplex canescens	0.42	26.67	27	33	0.31	42	367	0.01	4
6. Chrysothamnus nauseosus	0.19	40.00	40	67	0.29	19	172	*	**
7. Sarcobatus vermiculatus	0.03	40.00	40	67	0.10	3	206	0.70	144
8. Tetradymia canescens	0.00	13.33	13	67	**	0	67	*	**
9. Ephedra viridis	0.00	6.67	7	33	**	0	6	*	**
All Species	16.93					1693	5567		

Table 2.3-23 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
JULY 1975 (SUMMARY OF 1 TRANSECT)									
1. Atriplex confertifolia	2.56	100.00	103	**	0.37	256	833	*	**
2. Artemisia tridentata	1.83	60.00	62	**	0.61	183	583	*	**
3. Sarcobatus vermiculatus	1.34	20.00	21	**	0.67	134	83	*	**
4. Chrysothamnus nauseosus	0.51	60.00	61	**	0.26	51	283	*	**
5. Eurotia lanata	0.23	60.00	60	**	0.12	23	350	*	**
6. Tetradymia canescens	0.11	80.00	80	**	0.04	11	1583	*	**
7. Chrysothamnus viscidiflorus	0.00	80.00	80	**	0.00	0	1383	*	**
8. Atriplex canescens	0.00	40.00	40	**	**	0	216	*	**
9. Symphoricarpos oreophilus	0.00	20.00	20	**	**	0	33	*	**
All Species	6.58					658	5350		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-24. Species encountered in the mature tree stratum in the shadscale type for RBOSP

Species	Percent Cover	Percent Frequency	Cover m^2/ha	Density #/ha	Basal Area m^2/ha
	OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. Juniperus osteosperma	.00	25.00	0	2778	5.45
	MAY-JUNE 1975 (SUMMARY OF 3 TRANSECTS)				
1. Juniperus osteosperma	4.43	40.00	443	50	3.43

measured on all transects. Twenty, 0.5 m^2 quadrats were used to sample the herbaceous stratum on the 2 permanent transects. Each quadrat was sampled once in June and once again in July.

Two strata and 19 species were identified for the greasewood type: 5 species in the shrub stratum, and 14 species in the herbaceous stratum.

2.3.1.3.8.1 Herbaceous Stratum (Table 2.3- 25)

Eleven species contributed 12 percent cover during the May-June sampling period. Two annual forbs, Lappula redowskii, Chenopodium fremontii, and a perennial grass, Agropyron desertorum were dominant species, together contributing a relative cover of 68 percent. Six grass species contributed 41 percent of the total cover. Six of the 11 species encountered were annuals.

Thirteen species contributed 29 percent cover in the quadrats sampled in July. An annual forb, Kochia iranica was the dominant species, with a relative cover of 32 percent. Ninety-one percent of the species encountered in May-June were found again in July. Seven grass species contributed 34 percent of the total cover. Density values were high for three of the annual forb species, Kochia iranica, Chenopodium album, and Chenopodium fremontii.

2.3.1.3.8.2 Shrub Stratum (Table 2.3- 26)

Five species contributed a total cover of 42 percent for the May-June transects and four species provided 43 percent cover for the July transects. Sarcobatus vermiculatus was the dominant species for both sampling periods, contributing a relative cover of 75 percent for May-June, and 59 percent for July. Shrub stratum density was estimated at 1.0 individuals per m^2 in May-June, and 0.77 individuals per m^2 in July. Highest densities were recorded for Sarcobatus vermiculatus (0.55 individuals per m^2) during May-June, and for Chrsothamnus nauseosus (0.40 individuals per m^2) in July. Mean volume values indicate that Sarcobatus vermiculatus (0.65 m^3) was the largest species encountered in the greasewood type during the May-June sampling period.

2.3.1.3.8.3 Mature Tree Stratum

Mature trees were not encountered in the greasewood type during the summer quarter.

The greasewood type, by its name, implies that it is strongly dominated by Sarcobatus vermiculatus. However, this species is dominant only in scattered small areas within Artemisia tridentata stands usually in bottomland areas and on alluvial slopes. Because of its

Table 2.3-25 Species encountered in the herbaceous stratum in the greasewood type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			OCTOBER 1974 (SUMMARY OF 7 TRANSECTS)				
1. Bromus tectorum	1.87	20.00	22	29	187	*	**
2. Lepidium perfoliatum	1.86	11.43	13	14	186	*	**
3. Agropyron trachycaulum	0.70	32.86	33	57	70	*	**
4. Kochia iranica	0.36	2.86	3	14	36	*	**
5. Agropyron smithii	0.07	1.43	2	14	7	*	**
6. Elymus cinereus	0.07	1.43	2	14	7	*	**
7. Sitanion longifolium	0.06	7.14	7	29	6	*	**
8. Physaria floribunda	0.01	1.43	1	14	1	*	**
9. Lappula redowskii	0.00	1.43	1	14	0	*	**
All Species	5.00				500		
			MAY-JUNE 1975 (SUMMARY OF 3 TRANSECTS)				
1. Lappula redowskii	3.05	56.67	60	100	305	*	**
2. Chenopodium fremontii	2.40	76.67	79	100	240	*	**
3. Agropyron desertorum	2.35	30.00	32	33	235	*	**
4. Descurainia pinnata	1.33	80.00	81	100	133	*	**
5. Agropyron smithii	1.05	43.33	44	100	105	*	**
6. Bromus tectorum	0.88	26.67	27	33	88	*	**
7. Agropyron trachycaulum	0.30	30.00	30	67	30	*	**
8. Poa sandbergii	0.10	20.00	20	33	10	*	**
9. Elymus cinereus	0.08	6.67	7	33	8	*	**
10. Chenopodium leptophyllum	0.00	6.67	7	33	0	*	**
11. Lepidium perfoliatum	0.00	6.67	7	33	0	*	**
All Species	11.55				1155		

Table 2.3-25 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad.	Sociability
JULY 1975 (SUMMARY OF 3 TRANSECTS)							
1. Kochia iranica	9.40	36.67	46	67	940	35.1	95.7
2. Chenopodium album	6.47	63.33	70	67	647	20.4	32.2
3. Agropyron smithii	5.30	53.33	59	100	530	*	**
4. Chenopodium fremontii	3.47	46.67	50	67	347	8.3	17.8
5. Agropyron desertorum	2.60	30.00	33	33	260	*	**
6. Sitanion longifolium	1.20	6.67	8	33	120	*	**
7. Descurainia pinnata	0.37	20.00	20	33	37	1.5	7.5
8. Poa sandbergii	0.17	6.67	7	33	17	*	**
9. Agropyron trachycaulum	0.17	3.33	3	33	17	*	**
10. Elymus cinereus	0.13	3.33	3	33	13	*	**
11. Lappula redowskii	0.03	13.33	13	33	3	0.5	3.8
12. Bromus tectorum	0.00	3.33	3	33	0	*	**
13. Phlox longifolia	0.00	3.33	3	33	0	0.0	1.0
All Species	29.30				2930		

*Values not recorded.

**Values cannot be calculated.

Table 2.3-26 Species encountered in the shrub-tree seedling stratum in the greasewood type for RBOSP

	Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
			OCTOBER 1974 (SUMMARY OF 7 TRANSECTS)							
1.	Artemisia tridentata	26.45	100.00	125	100	0.58	2645	10313	**	**
2.	Sarcobatus vermiculatus	18.38	100.00	118	100	0.58	1838	4290	**	**
3.	Chrysothamnus viscidiflorus	0.44	25.00	25	29	0.23	44	806	**	**
4.	Chrysothamnus nauseosus	0.21	21.43	22	57	0.45	21	214	**	**
5.	Atriplex canescens	0.01	21.43	21	14	0.05	1	44	**	**
6.	Atriplex confertifolia	0.00	14.29	14	43	0.00	0	131	**	**
7.	Juniperus osteosperma	0.00	3.57	4	14	0.00	0	4	**	**
	All Species	45.49					4549	15802		
			MAY-JUNE 1975 (SUMMARY OF 4 TRANSECTS)							
1.	Sarcobatus vermiculatus	31.16	100.00	131	100	0.61	3116	5521	0.65	550
2.	Artemisia tridentata	7.90	85.00	93	100	0.33	790	3296	0.16	16
3.	Chrysothamnus nauseosus	2.55	45.00	48	50	0.29	255	1596	0.15	29
4.	Atriplex confertifolia	0.11	20.00	20	25	0.44	11	150	0.04	0
5.	Chrysothamnus viscidiflorus	0.00	15.00	15	50	0.00	0	12	0.00	**
	All Species	41.72					4172	10575		
			JULY 1975 (SUMMARY OF 1 TRANSECT)							
1.	Sarcobatus vermiculatus	25.70	100.00	126	***	.58	2570	2617	**	**
2.	Chrysothamnus nauseosus	12.04	100.00	112	***	.36	1204	4067	**	**
3.	Artemisia tridentata	5.62	100.00	106	***	.62	562	1000	**	**
4.	Atriplex confertifolia	0.00	80	80	***	.00	0	83	**	**
	All Species	43.36					4336	7767		

* Species not intercepted

** Value not recorded

*** Value cannot be calculated

minor importance, the greasewood type will be considered a variant, or association within the sagebrush type, and will be removed from major vegetation type status for classification and mapping purposes in the future.

2.3.1.3.9 Rabbitbrush

During the summer quarter, 2 permanent and 4 non-permanent transects were sampled in the rabbitbrush type. Shrub and tree strata were sampled on all transects. Twenty, 0.5 m^2 quadrats were used to sample the herbaceous stratum on the 2 permanent transects. Two strata and 23 species were identified for the rabbitbrush type: 6 species in the shrub stratum, and 17 species in the herbaceous stratum.

2.3.1.3.9.1 Herbaceous Stratum (Table 2.3-27)

Thirteen species contributed 26 percent total cover during the May-June sampling period. A perennial grass, Elymus cinereus, was the dominant species, providing a relative cover of 79 percent. Thirty-eight percent of the species present in the June quadrats were encountered again in July. Four grass species contributed 97 percent of the total cover. The very low cover values for forb species indicate their low importance in this type.

Nine species contributed 44 percent total cover during July. Elymus cinereus was again the dominant species, with relative cover of 84 percent.

2.3.1.3.9.2 Shrub Stratum (Table 2.3- 28)

Six species contributed 31 percent total cover during May-June and 3 species contributed 63 percent total cover in July. Chrysothamnus nauseosus was the dominant species in May-June sampling with relative cover of 89 percent, and Chrysothamnus viscidiflorus was dominant in July with a relative cover of 91 percent. Shrub stratum density was estimated at 1.9 individuals per m^2 in the May-June transects, and 0.59 individuals per m^2 in the July transect. Highest densities were recorded for Chrysothamnus nauseosus (1.12 individuals per m^2) in July. Mean volume values indicate that Chrysothamnus nauseosus (0.34 m^3) was the largest species encountered in the rabbitbrush type during the May-June sampling period.

2.3.1.3.9.3 Mature Tree Stratum

Mature class trees were not encountered in the rabbitbrush type during summer quarter sampling.

Field observations and previous work in this area (Vories, 1972) indicate that high density rabbitbrush stands are the result of rapid invasion by this species into abandoned agricultural or burned sites

Table 2.3-27 Species encountered in the herbaceous stratum in the rabbitbrush type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
		OCTOBER 1974 (SUMMARY OF 5 TRANSECTS)					
1. Elymus cinereus	5.87	44.00	50	80	587	*	**
2. Kochia iranica	1.20	10.00	11	20	120	*	**
3. Poa pratensis	0.96	14.00	15	20	96	*	**
4. Agropyron smithii	0.74	14.00	15	20	74	*	**
5. Agropyron spicatum	0.48	12.00	12	20	48	*	**
6. Agropyron trachycaulum	0.14	4.00	4	20	14	*	**
7. Lepidium perfoliatum	0.11	4.00	4	20	11	*	**
8. Bromus tectorum	0.03	4.00	4	20	3	*	**
9. Aster sp.	0.03	2.00	2	20	3	*	**
All Species	9.56				956		
		MAY-JUNE 1975 (SUMMARY OF 2 TRANSECTS)					
1. Elymus cinereus	20.05	95.00	115	100	2005	*	**
2. Bromus sp.	1.40	10.00	11	50	140	*	**
3. Poa sp.	1.33	35.00	36	50	132	*	**
4. Poa pratensis	1.08	25.00	26	50	108	*	**
5. Bromus tectorum	0.95	35.00	36	50	95	*	**
6. Sisymbrium linifolium	0.38	40.00	40	50	38	*	**
7. Artemisia ludoviciana	0.20	15.00	15	50	20	*	**
8. Scirpus acutus	0.08	15.00	15	50	8	*	**
9. Agropyron smithii	0.05	15.00	15	50	5	*	**
10. Collinsia parviflora	0.00	10.00	10	50	0	*	**

Table 2.3-27 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constance	Cover m^2/ha	Density #/Quad	Sociability
11. Taraxacum officinale	0.00	10.00	10	50	0	*	**
12. Chorispora tenella	0.00	5.00	5	50	0	*	**
13. Penstemon sp.	0.00	5.00	5	50	0	*	**
Unknown Crucifereae	0.00	30.00	30	**	0	*	**
All Species	25.00				2500		
JULY 1975 (SUMMARY OF 2 TRANSECTS)							
1. Elymus cinereus	36.60	95.00	132	100	3660	*	**
2. Poa pratensis	3.90	45.00	49	50	390	*	**
3. Agropyron smithii	1.00	25.00	26	50	100	*	**
4. Agropyron repens	1.00	5.00	6	50	100	*	**
5. Juncus balticus	0.70	10.00	11	50	70	*	**
6. Artemisia ludoviciana	0.25	10.00	10	50	25	0.2	2.0
7. Chenopodium fremontii	0.15	25.00	25	50	15	0.6	2.4
8. Descurainia pinnata	0.00	5.00	5	50	0	0.2	4.0
9. Taraxacum officinale	0.00	5.00	5	50	0	0.1	1.0
10. Unknown	0.10	5.00	5	50	10	0.2	4.0
All Species	43.70				4370		

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* Value not recorded in the field because of sampling procedure or absence of species.

** Value cannot be calculated because of absence of data.

Table 2.3-28 Species encountered in the shrub-tree seedling stratum in the rabbitbrush type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
			OCTOBER 1974 (SUMMARY OF 5 TRANSECTS)						
1. *Chrysothamnus nauseosus*	36.14	100.00	136	100	0.68	3614	7400	*	**
2. *Artemisia tridentata*	3.36	40.00	43	40	0.50	336	1650	*	**
3. *Sarcobatus vermiculatus*	0.45	50.00	50	60	0.34	45	144	*	**
4. *Atriplex canescens*	0.00	5.00	5	20	**	0	6	*	**
All Species	39.95					2995	9200		
			MAY-JUNE 1975 (SUMMARY OF 4 TRANSECTS)						
1. *Chrysothamnus nauseosus*	27.48	100.00	127	100	0.36	2748	11263	0.34	3831
2. *Artemisia tridentata*	1.78	50.00	52	50	0.18	178.	7321	0.00	0
3. *Sarcobatus vermiculatus*	1.54	45.00	46	75	0.36	154	525	0.00	0
4. *Chrysothamnus viscidiflorus*	0.25	20.00	20	25	0.26	25	137	0.02	2.75
5. *Ribes aureum*	0.00	5.00	5	25	**	0	4	*	**
6. *Symphoricarpos oreophilus*	0.00	5.00	5	25	**	0	4	*	**
All Species	31.05					3105	19259		
			JULY 1975 (SUMMARY OF 1 TRANSECT)						
1. *Chrysothamnus viscidiflorus*	58.03	100.00	158	**	0.89	5803	5050	*	**
2. *Artemisia tridentata*	3.40	100.00	103	**	0.49	340	700	*	**
3. *Chrysothamnus nauseosus*	2.02	80.00	82	**	0.40	202	200	*	**
All Species	63.45					6345	5950		

*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

which were formerly dominated by Artemisia tridentata. Since many rabbitbrush stands are being reinvaded by Artemisia tridentata, it appears that rabbitbrush constitutes a stage in secondary succession in the sagebrush type. Because of this interrelationship between Artemisia and Chrysothamnus, the rabbitbrush type will be removed from major vegetation type status, and will henceforth be considered a variant within the sagebrush type.

2.3.1.3.10 Riparian

During the summer quarter, 3 permanent and 4 non-permanent transects were sampled in the riparian vegetation type. Tree and shrub strata were sampled on all transects. The herbaceous stratum was sampled on the three permanent transects, and on 3 out of 4 non-permanent transects. The additional herbaceous sampling in this type will better characterize the relatively unique herbaceous flora of some riparian sites. A total of 60, $0.5 m^2$ quadrats was used to sample 6 permanent and non-permanent transects, of which 30 were resampled in July.

Three strata and 59 species were identified in the riparian type: 1 species in the tree stratum (Populus angustifolia - not encountered within any sampling transect), 13 species in the shrub stratum, and 45 species in the herbaceous stratum.

2.3.1.3.10.1 Herbaceous Stratum (Table 2.3-29)

Twenty-one species contributed 50 percent cover during the May-June sampling period. A perennial grass, Agropyron repens was the dominant species, contributing a relative cover of 73 percent. Seven species of grasses and grasslike plants contributed 84 percent of the total cover.

During July, 35 herbaceous species contributed a total cover of 57 percent. Two perennial grasses, Agropyron repens and Agropyron smithii shared dominance, together providing a relative cover of 48 percent. Fifty-two percent of the species found in the May-June transects were encountered again in the July transects. Eighteen species of grasses and grass-like plants contributed 91 percent of the total cover during July. Constancy values were generally low, indicating considerable variation among sampling sites within the riparian type. Most forb species occurred at low densities and low frequencies, except for a few high density patches of annual species such as Kochia iranica and Descurainia pinnata.

2.3.1.3.10.2 Shrub Stratum (Table 2.3- 30)

Nine species contributed a total cover of 10 percent for the May-June sampling period, and 12 species contributed a total cover of 31 percent for the July transects. Artemisia tridentata was the dominant shrub in the June transects, contributing 30 percent relative cover,

Table 2.3-29 Species encountered in the herbaceous stratum in the riparian type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
			OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)				
1. *Carex* sp.	13.88	30.00	44	50	1388	*	**
2. *Poa* sp.	8.01	22.50	31	50	801	*	**
3. *Scirpus acutus*	7.14	27.50	35	75	714	*	**
4. *Bromus inermis*	4.18	10.00	14	25	418	*	**
5. *Ranunculus cymbalaria*	3.37	30.00	33	75	337	*	**
6. *Rorippa nasturtium-aquaticum*	2.04	7.50	10	25	204	*	**
7. *Salsola iberica*	1.98	10.00	12	25	198	*	**
8. *Erigeron* sp.	1.87	12.50	14	25	187	*	**
9. *Plantago* sp.	1.68	20.00	22	50	168	*	**
10. *Triglochin maritima*	1.39	7.50	9	25	139	*	**
11. *Agropyron trachycaulum*	1.09	10.00	11	25	109	*	**
12. *Hordeum* sp.	1.05	27.50	29	75	105	*	**
13. *Eragrostis* sp.	0.76	5.00	6	25	76	*	**
14. *Rumex crispus*	0.45	12.50	13	25	45	*	**
15. *Artemisia ludoviciana*	0.40	2.50	3	25	40	*	**
16. *Taraxacum officinale*	0.35	7.50	8	25	35	*	**
17. *Bromus ciliatus*	0.28	5.00	5	25	28	*	**
18. *Chenopodium* sp.	0.27	17.50	18	50	27	*	**
19. *Senecio* sp.	0.25	2.50	3	25	25	*	**
20. *Elymus cinereus*	0.21	2.50	3	25	21	*	**
21. *Agropyron smithii*	0.20	7.50	8	50	20	*	**
22. *Malva* sp.	0.12	2.50	3	25	12	*	**
23. *Poa interior*	0.11	2.50	3	25	11	*	**

Table 2.3-29 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
24. Agropyron desertorum	0.09	2.50	3	25	9	*	**
25. Bromus tectorum	0.06	7.50	8	50	6	*	**
26. Lepidium perfoliatum	0.04	2.50	3	25	4	*	**
27. Typha latifolia	0.02	2.50	3	25	2	*	**
28. Stipa sp.	0.01	2.50	3	25	1	*	**
Unknown Cruciferеae	0.10	2.50	3	25	10	*	**
All Species	51.41				5141		
			MAY-JUNE 1975 (SUMMARY OF 4 TRANSECTS)				
1. Agropyron repens	36.26	70.00	106	75	3626	*	**
2. Poa pratensis	3.20	40.00	43	75	320	*	**
3. Taraxacum officinale	1.91	45.00	47	100	191	*	**
4. Carex sp.	1.63	7.50	9	50	163	*	**
5. Artemisia ludoviciana	1.13	22.50	24	25	113	*	**
6. Elymus cinereus	0.50	2.50	3	25	50	*	**
7. Juncus balticus	0.40	7.50	8	75	40	*	**
8. Descurainia pinnata	0.38	30.00	30	50	38	*	**
9. Zygadenus venenosus	0.25	2.50	3	25	25	*	**
10. Achillea lanulosa	0.23	5.00	5	25	23	*	**
11. Artemisia dracunculus	0.23	5.00	5	25	23	*	**
12. Bromus tectorum	0.20	12.50	13	25	20	*	**
13. Lactuca serriola	0.13	2.50	3	25	13	*	**
14. Chaenactis douglasii	0.08	7.50	8	25	8	*	**
15. Bromus inermis	0.08	2.50	3	25	8	*	**

Table 2.3-29 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
16. Chenopodium fremontii	0.03	15.00	15	50	3	*	**
17. Sisymbrium linifolium	0.03	2.50	3	25	3	*	**
18. Artemisia frigida	0.00	5.00	5	25	0	*	**
19. Chenopodium album	0.00	2.50	2	25	0	*	**
20. Erigeron eatonii	0.00	2.50	2	25	0	*	**
21. Physaria floribunda	0.00	2.50	2	25	0	*	**
Unknown	3.24	22.50	**	**	324	*	**
All Species	49.85				4985		
			JULY 1975 (SUMMARY OF 5 TRANSECTS)				
1. Agropyron repens	13.96	18.00	32	20	1396	*	**
2. Agropyron smithii	13.20	24.00	37	40	1320	*	**
3. Poa pratensis	7.18	42.00	49	80	718	*	**
4. Elymus cinereus	7.00	14.00	21	20	700	*	**
5. Agropyron sp.	3.80	8.00	12	40	380	*	**
6. Glyceria striata	1.28	10.00	11	40	128	*	**
7. Carex vernacula	1.20	4.00	5	40	120	*	**
8. Carex sp.	1.00	4.00	5	20	100	*	**
9. Bromus inermis	0.94	4.00	5	20	94	*	**
10. Ranunculus cymbalaria	0.80	12.00	12	80	80	0.6	4.8
11. Taraxacum officinale	0.72	36.00	36	100	72	2.2	6.1
12. Carex nebraskensis	0.70	2.00	3	20	70	*	**
13. Smilacina stellata	0.60	2.00	3	20	60	0.3	15.0
14. Hordeum jubatum	0.46	4.00	4	40	46	*	**
15. Descurainia pinnata	0.34	12.00	12	40	34	1.5	12.5

Table 2.3-29 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Cover m^2/ha	Density #/Quad	Sociability
16. *Kochia iranica*	0.32	4.00	4	20	32	2.2	56.0
17. *Agropyron trachycaulum*	0.32	12.00	12	20	32	*	**
18. *Juncus balticas*	0.24	6.00	6	40	24	*	**
19. *Solidago* sp.	0.20	2.00	2	20	20	0.4	19.0
20. *Chenspodium album*	0.18	8.00	8	40	18	0.2	2.5
21. *Achillea lanulosa*	0.14	10.00	10	40	14	0.4	3.6
22. *Hordeum brachyantherum*	0.10	4.00	4	40	10	*	**
23. *Sporobolus airoides*	0.10	4.00	4	40	10	*	**
24. *Rumex utahensis*	0.10	2.00	2	20	10	0	1.0
25. *Chenopodium leptophyllum*	0.08	2.00	2	20	8	0.1	3.0
26. *Chenopodium fremontii*	0.06	16.00	16	40	6	0.4	2.3
27. *Lactuca serriola*	0.06	4.00	4	40	6	0.1	2.0
28. *Agropyron spicatum*	0.04	2.00	2	20	4	*	**
29. *Geranium richardsoni*	0.04	2.00	2	20	4	0.1	3.0
30. *Galium boreale*	0.02	2.00	2	20	2	0.1	4.0
31. *Gutierrezia sarothrae*	0.02	2.00	2	20	2	0.0	1.0
32. *Juncus saximontanus*	0.02	2.00	2	20	2	*	**
33. *Cirsium arvense*	0.00	2.00	2	20	0	0	1.0
34. *Cirsium* sp.	0.00	2.00	2	20	0	0	1.0
35. *Poa ampla*	0.00	2.00	2	20	0	*	**
36. Unknown	1.86	18.00	**	**	186	*	**
All Species	57.08				5708		

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*Value not recorded in the field because of sampling procedure or absence of species.

**Value cannot be calculated because of absence of data.

Table 2.3-30 : Species encountered in the shrub-tree seedling stratum in the riparian type for RBOSP

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
OCTOBER 1974 (SUMMARY OF 4 TRANSECTS)									
1. Chrysothamnus viscidiflorus	1.57	25.00	27	25	0.54	157	451	*	**
2. Artemisia tridentata	0.44	18.75	19	25	0.53	44	910	*	**
All Species	2.01					201	1361		
MAY-JUNE 1974 (SUMMARY OF 5 TRANSECTS)									
1. Artemisia tridentata	2.95	40.00	43	40	0.42	295	1257	*	**
2. Chrysothamnus nauseosus	1.69	68.00	70	80	0.42	169	670	0.02	0.79
3. Symphoricarpos oreophilus	1.55	32.00	34	40	0.48	155	897	*	**
4. Ribes aureum	1.44	24.00	25	40	1.80	144	173	*	**
5. Rosa woodsii	0.83	20.00	21	20	0.52	83	633	*	**
6. Prunus virginiana	0.63	12.00	13	20	0.63	63	273	*	**
7. Amelanchier utahensis	0.63	8.00	9	20	0.53	63	37	*	**
8. Sarcobatus vermiculatus	0.00	8.00	8	20	**	00	37	*	**
9. Ribes cereum	0.00	4.00	4	20	**	00	20	*	**
All Species	9.72					972	3997		
JULY 1975 (SUMMARY OF 2 TRANSECTS)									
1. Salix interior	9.90	80.00	90	100	0.58	990	2000	*	**
2. Betula fontinalis	7.82	50.00	58	50	3.13	782	108	*	**
3. Rosa woodsii	4.00	90.00	94	100	0.62	400	600	*	**
4. Ribes aureum	3.93	80.00	84	100	0.56	393	392	*	**
5. Symphoricarpos oreophilus	2.80	80.00	83	100	0.93	280	492	*	**

Table 2.3-30 (Continued)

Species	Percent Cover	Percent Frequency	Importance Value	Constancy	Mean Intercept (m)	Cover m^2/ha	Density #/ha	Mean Volume (m^3)	Volume m^3/ha
6. Swida sericea	0.67	20.00	21	50	0.67	67	17	*	**
7. Ribes inerme	0.60	60.00	61	100	0.60	60	217	*	**
8. Chrysothamnus nauseosus	0.47	60.00	60	100	0.47	47	150	*	**
9. Artemisia tridentata	0.38	70.00	70	100	0.38	38	167	*	**
10. Prunus virginiana	0.35	10.00	10	50	0.70	35	8	*	**
11. Ribes cereum	0.20	20.00	20	50	0.40	20	33	*	**
12. Amelanchier utahensis	0.00	30.00	30	100	**	0	117	*	**
All Species	31.10					3110	4300		

---

[*] Value not recorded in the field because of sampling procedure or absence of species.

[**] Value cannot be calculated because of absence of data.

and Salix interior and Betula fontinalis shared dominance on transects sampled in July, providing 57 percent relative cover. Shrub stratum density is estimated at 0.39 individuals per m^2 in the May-June transects, and 0.43 individuals per m^2 in the July transects. Highest densities were recorded for Artemisia tridentata (0.13 individuals per m^2) and for Salix interior (0.2 individuals per m^2) for July transects. A mean volume of 0.02 m^3 was calculated for Chrysothamnus nauseous. Volumes of other species were not recorded because none were crossed by the intercept tape.

2.3.1.3.10.3 Mature Tree Stratum

Mature class trees were not encountered within the transects sampled during the summer quarter. A few mature individuals of Populus angustifolia were observed growing below Cottonwood Spring in T1S, R99W, S19, SESW¼ during the July sampling period.

The May-June sampling sites were located primarily in spring-fed pastures, and in the beds of intermittent streams. As a consequence, dominant species encountered during sampling are not characteristic of streamside communities that might be expected in the region. In general, however, the species encountered at these sample sites do represent the species composition of sites bordering intermittent streams and moist pasture sites in the study area. The two July transects were placed in hillside and streambottom springs that have been little disturbed by grazing. The composition of these sites generally consists of more mesic species.

2.3.1.4 Summary and Conclusions

The summary consists of the flora identified to date in the Tract C-a study area, and a synopsis by vegetative type of the significant phytosociological parameters presented in the tables and discussed in the Results section. Broad comparisons of the data are made among all three sampling periods, and any differences resulting from changes in field sampling methods are noted.

The flora identified to date in the Tract C-a study area includes 5 species of trees, 36 species of shrubs and 201 herbaceous species, of which 41 species are classified as grasses and/or grass-likes (Table 2.3- 2). Three species included in the flora require special notation. Astragalus lutosus, a milkvetch is on the Smithsonian Institution threatened and endangered plant species list (Smithsonian Institution, 1975) and was located near Cottonwood Spring on Big Duck Creek. Aquilegia barnebyi, a columbine endemic to the Green River formation (Munz, 1949), was located near Cottonwood Spring on Big Duck Creek. Aquilegia caerulea, Colorado columbine (Harrington, 1964), is the state flower and was located in most of the aspen stands and some of the more mesic mixed brush stands near Cathedral Bluffs.

Aspen (Tables 2.3- 7 , 2.3- 8 and 2.3- 9)--The aspen type is situated primarily on north facing slopes at high elevations in the study area. The open canopy (33-38 percent total cover), consisting of *Populus tremuloides*, allows the penetration of light and moisture and permits the development of a dense and diverse shrub stratum (11 species, 62-114 percent cover, 0.61 - 3.5 individuals per m^2). Abundant shrub species include *Symphoricarpos oreophilus* and *Amelanchier alnifolia*. The herbaceous cover fluctuates greatly over the growing season, ranging from 3 percent cover in the spring to 42 percent cover in the summer. *Carex geyeri* dominates this stratum in the spring and fall, with several forb species becoming more important during the summer.

Douglas Fir (Tables 2.3- 3 , 2.3- 4 and 2.3-5)--The Douglas fir type occurs in isolated stands on northerly slopes at high elevations in the study area. This type is dominated by one tree species, *Pseudotsuga menziesii*, which provides a ground cover of 40-70 percent, and occurs at densities of 0.48 and 0.51 per 10 m^2. In stands with numerous openings, a diverse and often dense shrub layer develops, with a total cover of 39-40 percent and a density of 0.8 - 1.14 individuals per m^2. Abundant shrub species include *Symphoricarpos oreophilus* and *Amelanchier utahensis*. The herbaceous stratum is strongly dominated by a sedge, *Carex geyeri*. Herbaceous cover fluctuates from less than 10 percent in the spring to greater than 20 percent in the summer and fall. *Carex geyeri* dominates the cover in the spring before emergence of forb species, and then shares dominance with a low shrub, *Pachystima myrsinites* over the rest of the season. Some differences are noted in density between October transects when large shrub species are counted by stems, and summer quarter transects when these species are counted by clones, or patches. Overall density is not greatly different between the two periods since the smaller, more abundant species are counted the same way during all three sampling periods.

Mixed Brush (Tables 2.3- 10, 2.3-11 and 2.3-12)--The mixed brush type consists of a wide range of shrubs and occupies a wide range of habitats. Mixed brush communities range from tall dense *Quercus gambelii* and *Amelanchier utahensis* stands at higher elevations to low-growing *Artemisia tridentata*, *Amelanchier utahensis*, and *Symphoricarpos oreophilus* stands on upland ridgetops, and to *Cercocarpus montanus* and *Amelanchier utahensis* stands on dry slopes. The shrub stratum is usually two-layered with the upper layer dominated by *Quercus gambelii*, *Amelanchier utahensis*, *Cercocarpus montanus*, and *Prunus virginiana*. The lower layer is dominated by a mixture of *Artemisia tridentata*, *Chrysothamnus viscidiflorus*, *Symphoricarpos oreophilus*, and *Purshia tridentata*. The shrub stratum provides a dense cover (40-77 percent), and high density (1.0-1.6 individuals per m^2). Herbaceous cover ranges from 5 percent in the spring to 15-20 percent in the summer and fall. *Carex geyeri* was the dominant species over all sampling periods.

Some differences are noted in density between October transects when large shrub species are counted by stems, and summer quarter transects when these species are counted by clones, or patches. Overall density is not greatly different between the two periods, however, since the smaller, more abundant shrub species are counted the same way during all three sampling periods.

Pinyon-Juniper (Tables 2.3-13 , 2.3-14 and 2.3-15)--The pinyon-juniper type occupies slopes and ridgetops over much of the central and eastern part of the study area. This type is dominated by two tree species, Pinus edulis and Juniperus osteosperma, which form open, low density stands (20-30 percent total cover, 0.25 - 0.31 individuals per 10 m^2). Up to 15 shrub species may occur in this type, with Artemisia tridentata and Amelanchier utahensis frequently the dominant species. All shrub species together provide sparse cover (8-13 percent), and occur at low densities (0.33 - 0.41 individuals per m^2). Herbaceous cover is very sparse (2-6 percent), and shows little change from season to season. Dominant species for all three periods are three grasses, Agropyron trachycaulum, Poa sandgergii and Orysopsis hymenoides. Grasses and sedges contribute over 60 percent of the total cover for all sampling periods.

Sagebrush (Tables 2.3- 16, 2.3- 17 and 2.3-18)--The sagebrush type is the most widely distributed plant community on the study area, occurring on deeper soils along stream bottoms, and on upland areas which range from 6000 to 8500 feet in elevation. This type is dominated by one species, Artemisia tridentata, and to a lesser extent by Symphoricarpos oreophilus in sites at higher elevations. A diverse (16 species) shrub stratum provides 30-40 percent cover, and occurs at densities of 1.2 - 1.9 individuals per m^2. Herbaceous cover is sparse (7-17 percent cover), but is comprised of the largest number of species recorded for any type sampled (more than 60). The dominant species is a grass (Poa sp.) for all sampling periods. Total cover increased slightly (10 percent) between spring and summer. Grasses and sedges contributed approximately half of the total cover for the summer quarter sampling periods, and approximately 60 percent for October 1974 sampling period.

Bald (Tables 2.3-19 and 2.3-20)--The bald type occupies the windswept ridges and slopes at higher elevations near Cathedral Bluffs. Both shrub and herbaceous species are low-growing, giving a very uniform appearance to the type. The few (4-8) shrub species do not form a distinct stratum but are part of the herbaceous stratum, and provide cover of only 1 percent. The herbaceous stratum is diverse (43-46 species), and provides a total cover of 9 percent in the spring and up to 22 percent in the summer and fall. Dominant species are a mixture of grasses, Agropyron trachycaulum, Koeleria gracilis, and forbs, Astragalus spatulatus, Penstemon caespitosus, Hymenoxys acaulis, and Haplopappus nuttallii.

Shadscale (Tables 2.3-22 , 2.3-23 and 2.3-24)--The shadscale type occurs primarily on south facing dry talus slopes along the lower drainages of the study area. The shrub stratum provides low cover (6-17 percent) and densities of 0.53 - 0.84 individuals per m^2. Dominant species are Atriplex confertifolia, Artemisia tridentata, and Chrysothamnus sp. Sarcobatus vermiculatus and Atriplex canescens are frequent on some slopes within the type, possibly because of higher soil salinities at these sites. The herbaceous stratum is sparse and unvarying (1-3 percent cover), and consists of a grass Oryzopsis hymenoides, and several perennial forb species.

Greasewood (Tables 2.3-25 and 2.3-26)--The greasewood type occupies the alluvial deposits in the lower drainages of the study area. It is dominated by Sarcobatus vermiculatus, Artemisia tridentata, and Chrysothamnus nauseosus. The shrub stratum consists of medium sized shrubs with a moderate cover (42-45 percent) and a low ephemeral herbaceous cover (5-29 percent). Nine out of a total of 15 herbaceous species are annuals, and are active only during spring and early summer when soils are moist. Frequently encountered species include Bromus tectorum, Lappula redowskii, and Kochia iranica.

Rabbitbrush (Tables 2.3-27 and 2.3-28)--The rabbitbrush type is a secondary successional stage which develops on disturbed Artemisia tridentata areas. In many areas dominated by Chrysothamnus sp. the charred stumps of Artemisia tridentata still remain. The rabbitbrush type is characterized by almost pure stands of Chrysothamnus nauseous or Chrysothamnus viscidiflorus. The shrub stratum provides high cover (31-63 percent) and high shrub densities (0.59 - 1.92 individuals per m^2). The herbaceous stratum varies in cover from 26 percent during the spring, 44 percent during mid-summer, to 10 percent during the fall. This stratum is strongly dominated by a grass Elymus cinereus, and contains few species (13).

Riparian (Tables 2.3-29 and 2.3-30)--The riparian type is restricted to small seeps and springs along the intermittent streams crossing the study area. Salix and Populus species, characteristic of streamside communities in this region, are almost absent. Many springs in the study area have been developed as pastures for livestock, with the result that most shrub species have been removed and replaced by pasture and weedy grass species. The great heterogeneity of the sites sampled (due to varying degrees of disturbance) allows few comparisons among sampling periods. The shrub stratum provided cover ranging from 0 percent in pasture areas to 50 percent in hillside springs where Salix interior and Betula fontinalis were predominant. Herbaceous stratum cover was greater than 50 percent for all sampling periods, and was dominated by a sedge Carex sp., and grasses Agropyron repens and Poa pratensis. Little change in cover was observed among sampling periods, reflecting the continually moist growing conditions.

2.3.1.5--VEGETATION RAW DATA

2.3.1.5--VEGETATION RAW DATA

83.C.2.2.1-10

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Aspen Transect # 1 Type Perm

T 25 R 100 W S 15 1/4 1/4 S [illegible]/SW Transect Length 100 m.

Aspect (degrees) 58° (45 / 32.0) Slope (percent) 45 % Elevation (feet) 8400'

Field Analyst(s) Pich [illegible] Date 6-4-75

Site Description see [illegible] SHEET QA Check [illegible]

				# in each 6 x 20 m quadrat					
	Species	Code #	Phenology Code	1 3	2	3 1	4	5	Condition
1	P. tremuloides	3	1	3	6	1	2	5	[illegible] dead
2								17	
3									
4									
5									

	Intercepts (~~cm~~) M								
Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
P. tremul	9.55	11.65	16.33	21.45	4.65	7.43	5.15	6.33	27, 22, 24.5]-3
	5.66	7.33	6.59	8.73	8.90	11.60	13.50	17.50	
	17.15	19.45		—	8.65	11.33	11.65	14.25	11, 12.5, 9, 25, 16
	5.61	6.76	7.6	9.75	10.44	10.47	15.44	17.36	15
									23
									26, 11,
									11.5, 46, 18, 21
									16,

K.V.

LINE-STRIP METHOD 83.C.2.2.1-11
SHRUB, TREE SEEDLING STRATUM
Beg. Pt.
near A-8 (old Aspen grid)

Project 83
Sheet 1 of 2

Vegetation Type Aspen
Permanent Transect # 1
2 S R 100W S 15 1/4 1/4 S NW/SW
Transect Length 100 meters
Aspect (degrees) 58° (45 / 321)
Slope (percent) 45%
Elevation (feet) 8400'
Field Analyst(s) Pick / Ellis
Date 6-4-75
Site Description [illegible] Aspen (3% [illegible])
[illegible]
Grassy herb [illegible]
Bisected by dip n cove
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1 3	2 2	3 1	4	5	Condition
1 P[illegible]	23	1	72	-	3	80	51	normal
2 [illegible]	33	1	45	70	32	23	19	[illegible]
3 Rosa woodsii K.V.	041 20/20	1	19	65	10	15	3	normal
4 P[illegible]	3	1	17	15	10	23	6	normal
5 A[illegible]	32	1,2	22	4	8	7	8	[illegible]
6 Ribes sp.	27	1	12	41	-	1	3	normal
7 [illegible]	25	1	1	-	-	-	—	normal
8 A[illegible]	14	2	-	-	2	-	—	normal
9								
10								

Intercepts (cm) Meters # many regen.

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
P[illegible]	0.00	0.35	.79	1.33	1.69	.50	2.65	2.97	1.33	3.50	3.73	[illegible]
	3.68	3.97	.45	4.09	4.41	.33	4.18	5.09	2.1	4.22	4.83	2.5
	6.45	7.17	1.33	5.31	[illegible]	.25	9.68	9.73	.19	9.89	10.19	[illegible]
	11.11	11.69	.75	13.50	13.72	.54	16.74	[illegible]	.33	0	0	
	0.00	1.70	3.5	3.14	[illegible]	[illegible]	5.20	5.40	.25	9.1	10.5	1.7
	10.60	10.78	.95	10.91	11.09	.34	12.32	12.59	[illegible]	12.80	[illegible]	[illegible]
	16.10	16.32	.27	19.91	20.01	.04	12.26	13.56	.95	13.74	13.92	1.0
	14.30	14.72	.79	15.55	16.03	.37	18.92	19.34	.20	19.67	20.03	.57
A[illegible]	3.53	3.70	.62	10.73	11.04	1.20	13.13	13.31	1.15	15.00	15.61	.35
	17.72	[illegible]	.65	18.65	18.74	.18	2.30	3.19	.55	7.71	7.83	[illegible]
	9.10	13.03	3.2	0.4	2.65	4.1	4.51	9.12	5.2	17.41	9.81	2.3
	7.14	13.36	3.9	13.42	10.53	2.5	11.40	12.11	1.35	12.00	13.11	3.4
P[illegible]	0.51	2.32	1.55	5.72	6.75	1.65	[illegible]	12.52	2.75	13.69	[illegible]	[illegible]
	15.63	16.10	1.40	9.75	11.03	3.95	16.13	[illegible]	.42	16.62	16.81	.55
	1.15	3.34	[illegible]	15.30	16.15	2.1	17.11	17.21	.85	17.39	18.30	5.1
	18.27	19.91	2.5	19.20	19.48	.75	1.44	2.13	2.5			

83.C.2.2.F12

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

2S 100W 15 NWSW

Sheet 2 of 2

Vegetation Type Aspen

Permanent Transect # 1

Date 6-4-75

in meters

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Symp	1.81	1.96	.35	5.95	6.13	.50	6.32	7.01	1.0	8.42	8.89	.51
	10.36	10.57	.10	15.51	15.59	.75	12.20	12.26	.06	18.03	18.22	.25
	18.95	19.11	.35	0.31	0.63	.25	1.69	1.82	.40	3.72	3.90	1.10
	9.62	9.66	.20	11.04	11.42	.28	14.43	14.46	.08	15.52	16.20	.30
	16.71	17.02	.22	17.35	17.85	.55	1.92	1.93	.25	2.39	2.90	.40
	3.11	3.33	.18	5.81	5.90	.15	6.44	6.93	.75	7.21	7.41	.20
	11.26	11.34	.05	12.80	13.29	.50	13.80	14.05	1.22	17.06	18.35	.67
	19.00	19.14	.26	19.39	19.90	.68		0		CONT'D		Below
Rosa. woodsii ~~sp.~~	3.02	3.12	.15	3.39	3.62	.08	4.68	4.70	.03	11.26	11.27	.01
	11.60	11.72	.15	14.33	15.10	1.10	15.69	15.81	.18	18.0	18.04	.09
	18.81	18.90	.25	4.20	4.31	.06	6.45	6.53	.03		0	
	14.74	14.92	.42									
Ribes sp.	7.55	7.75	.25	18.53	18.65	.15	18.36	19.09	.20	1.41	1.44	.25
	2.51	2.61	.25	8.08	8.22	.30		0			0	
	5.42	5.62	.44	7.26	7.34	.21	7.40	7.70	.49			
Quercus gambelii	16.55	18.20	4.3	0	0	0						
Symp. o.	3.69	3.81	.47	15.15	15.20	.06	17.38	17.70	.75			
Amelanchier cont'd	17.36	19.08	3.7									

83.6.2.2.1-13

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project S3

Sheet 1 of 1

Vegetation Type ASPEN Transect # 1 Type PERM.

25 R 100W S 15 1/4 1/4 S NW SW Quadrat Size [illegible]

Aspect (degrees) -58 [illegible] Slope (percent) 45 Elevation (feet) 8700

Field Analyst(s) NICK / ELLIS Date 4 Jun 75

Site Description Open stand, dense shrub (3.5 m [illegible]) QA Check

[illegible] to 2 [illegible]

Species	Code #	Phenology Code	1	2	3	4	5	6	7	8	9	10
Total Percent Cover			7	6	1	1	2	2	1	3	7	10
Percent of Total · Each Species												
Carex rossii	160	2	5	5	1	5	15	[illegible]	7	3		2
Lupinus marginatus K.V.	1065 ~~165~~				2						1	
Geranium richardsonii K.V.	84											
Erigeron [illegible] eximius K.V.	~~263~~ 294				T	T						
Potentilla quinquefolia K.V.	~~262~~ 237				T							
Cryptantha sericea K.V.	~~096~~ 194				T							
Viola palustris K.V.	~~118~~ 318								T	T		
Thalictrum fendleri K.V.	116											T

ECI

LINE-STRIP DATA SHEET 83.C.2.2.1-14
MATURE TREE STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Aspen Transect # 2 Type Nm-Perm
T 2S R 100w S 27 1/4 1/4 S NE/SE Transect Length 100 met.
Aspect (degrees) 341° Slope (percent) 15 %. Elevation (feet) 8400'
Field Analyst(s) Dick Ellis Date 6-4-75
Site Description open even aged stand [illegible] max. ht = 8 m. Rel. low [illegible] cover (1 m.) QA Check [illegible]

smaller aspen [illegible] 4 m. high
large [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 P. tremuloides	B	1	13	4	3	11	14	
2							6	
3								
4								
5								

Species	Intercepts (~~cm~~ m) I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter (cm) of Each Tree
P. trem.	4.63	5.70	5.26	6.15	0.32	0.91	13.36	15.31	12, 12, 10, 11, 9
	5.80	12.60	7.72	11.29	[illegible]	13.50	13.40	15.60	12, 11, 13, 12, 8
	16.65	16.31	17.55	20.20	.00	2.10	.30	3.05	12, 10, 8
	.41	2.70	2.70	4.20	7.26	9.12	11.04	12.60	
	11.90	14.00							11, 11, 10, 8
									11, 12, 9
									17, 13, 9, 8, 9
									15, 13, 13, 12
									10, 9
									13, 13, 13, 9, 8, 9
									9, 10, 12, 15, 10
									15, 17, 15

ECI

83, C.2.2.1-15

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

ation Type Aspen Non-Permanent Transect # ~~[illegible]~~ 2

2 S R 103W S 27 1/4 1/4 S NE/SE Transect Length 100m.

ect (degrees) 341° Slope (percent) 15% Elevation (feet) 8400'

ld Analyst(s) [illegible]

Date 6-11-75

e Description [illegible]

QA Check [illegible]

cies	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
P. tremuloides	3	1	3	26	17	18	10	normal
Ribes cereum K.V.	~~27~~ 042	1	26	17	32	30	15	"
[illegible]	33	1	40	30	7	20	49	"
[illegible]	10	1	1	3	2	6	1	" (LARGE
Rosa woodsii K.V.	0419 ~~28~~	1	20	5	5	18	4	"
Prunus virginiana	23	1	1	3	63	21	-	"
[illegible]	32	1	-	2	-	1	1	"
[illegible]	14	2	-	-	-	-	2	"

Intercepts (cm) m

cies	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
P. [illegible]	[illegible]	0.33	0.59	0.64	1.11	1.21	1.51	2.65	10.20	10.51
	10.91	11.60	11.65	12.01	13.10	13.59	13.21	14.48	14.50	15.23
	17.10	17.20	18.62	19.10	2.51	2.59	3.70	4.22	5.59	5.91
	7.20	8.91	3.11	3.35	3.85	4.63	5.51	5.86	12.70	13.[illegible]
	7.52	[illegible]	13.33	13.56						
[illegible]	13.71	13.72	14.55	14.61	17.20	17.52	17.29	17.53	17.58	[illegible]
	19.80	20.00	0.0	[illegible]	6.55	1.61	3.41	3.49	2.55	[illegible]
	15.36	16.12	0.22	1.31	3.75	6.33	7.53	7.79	4.00	4.49
	13.09	13.29	2.51	2.65	[illegible]	[illegible]	.02	.31	2.95	3.02
	[illegible]	4.03								

ECI

83, C.2.2.1-15

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Aspen

Non-Permanent Transect # ~~[illegible]~~ 2

T 2S R 103W S 27 1/4 1/4 S NE/SE

Transect Length 100m.

Aspect (degrees) 341°

Slope (percent) 15%

Elevation (feet) 8400'

Field Analyst(s) [illegible]

Date 6-11-75

Site Description See veg. trees sec.

QA Check

	Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1	P. tremuloides	3	1	3	26	17	18	10	NORMAL
2	Ribes cereum K.V.	~~27~~ 042	1	26	17	32	30	15	"
3	Sambucus [illegible]	33	1	40	30	7	20	49	"
4	Acer glab.	10	1	1	3	2	6	1	" (LARGE
5	Rosa woodsii K.V.	041 ~~28~~	1	20	5	5	18	4	"
6	Prunus virgin.	23	1	1	3	63	21	-	"
7	Amel.	32	1	-	2	-	1	1	"
8	Artemisia trid.	14	2	-	-	-	-	2	"
9									
10									

Intercepts (cm) m

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
P. tremul.	0.21	0.33	0.59	0.64	1.11	1.21	1.51	2.65	10.20	10.51
	10.91	11.60	11.65	12.41	13.10	13.29	13.21	14.48	14.50	15.23
	17.10	17.20	18.62	19.10	2.51	2.59	3.70	4.22	5.59	5.91
	7.30	8.51	3.11	3.35	3.55	4.63	5.51	5.56	12.70	13.5
	7.52	8.00	10.33	10.56						
Rib.	13.71	13.72	14.55	14.61	17.20	17.42	17.29	17.53	17.58	18.00
	19.80	20.00	0.0	0.40	1.55	1.61	3.41	3.49	7.55	7.6
	15.36	16.12	0.22	1.31	3.75	4.33	7.53	7.79	4.00	4.49
	13.09	13.29	2.51	2.65	10.00	10.53	.02	.31	2.95	3.02
	4.01	4.03								

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83.C.2.2.1-17

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Aspen. Transect # 3 Type Permanent

T 15 R 100 W S 33 1/4 1/4 S SWSE Transect Length 100 meters

Aspect (degrees) 351° Slope (percent) 40% Elevation (feet) 8520'

Field Analyst(s) Pick, Kestrel, Koehler Date 6-5-75

Site Description mature stand, has understory <1-4 in. tall QA Check

large aspen clumps

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Populus trem.	3	1	6	13	5	11	9	normal
2 Pseudotsuga menziesii	4	2	2	3	-	-	-	"
3								
4								
5								

Intercepts (~~cm~~ meters)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
Pseudo.	1.0	5.61	16.93	17.84					19.5, 22.0
									17.5, 34.0, 25.5
Pop. tr.	8.18	9.56	11.90	13.80	15.40	18.63	0.03	2.11	23.0, 19.0, 23.0, 15.0
tremuloides	6.92	9.43	11.12	14.90	0.05	2.33	1.30	3.01	19.0, 26.0
	2.49	6.18	11.04	15.62	0.53	1.96	6.75	13.72	26.5, 14.0, 20.0
	10.59	11.86	12.08	15.08	19.11	19.57	5.41	7.33	21.0, 20.5, 8.5
	7.53	9.36	12.78	16.08					24.0
									22.0, 9.0, 22.0
									25.5, 15.0
									18.0, 23.0, 13.0
									28.0, 22.0, 18.0
									19.0, 19.0, 21.5
									14.0, 25.0
									19.5, 20.0, 16.0, 18.0
									19.0 21.0 22.0
									23, 22

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83.C.2.2.1-18

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Aspen
Permanent Transect # 3
T 15 R 100W S 33 1/4 1/4 S SWSE
Transect Length 100m
Aspect (degrees) 351°
Slope (percent) 10°
Elevation (feet) 8520
Field Analyst(s) [illegible]
Date 6/5/75
Site Description [illegible] heavy understory [illegible] aspen [illegible] above transect
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Amelanchier [illegible]	32	2	11	14	8	19	30	[illegible]
2 Acer glabrum	10	2	4	2	1		1	
3 Populus trem.	3	2		4	4	12	6	
4 Pseudotsuga menz.	4	2	2	3				
5 Symph. oreoph.	33	2	61	41	49	38	26	
6 P. myrsinites	23	2	2	7	18	15	17	
7 Rosa woodsii k.v	041 ~~20~~	2		4	2	8	13	✓
8								
9								
10								

Intercepts ~~(cm)~~ meters

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
[illegible]	5.00	5.52	.52	5.31	5.50	.24	5.91	5.99	.07	6.52	[illegible]	[illegible]
	19.79	19.99	.26	0.50	.98	.38	1.94	2.19	.25	2.36	[illegible]	.4
	3.31	3.61	.25	4.21	4.50	.21	4.21	[illegible]	1.25	7.32	7.56	[illegible]
	12.95	12.41	.25	[illegible]	[illegible]	.04	14.50	15.00	.38	5.72	6.22	[illegible]
	6.70	8.20	1.50	[illegible]	9.12	[illegible]	11.23	11.93	.40	15.06	16.13	[illegible]
	18.76	[illegible]	.30	[illegible]	[illegible]	.18	5.32	6.03	.42	8.90	9.01	[illegible]
	18.32	18.56	.37	19.35	[illegible]	.63	0.91	1.06	.12			
[illegible]	0.00	4.21	3.75	[illegible]	[illegible]	[illegible]	14.27	14.76	1.25			
[illegible]	18.03	18.27	.28	2.09	2.27	.30	2.90	[illegible]	.20	7.50	7.62	[illegible]
	4.89	5.93	.75	5.11	6.06	.40	5.73	[illegible]	3.75	14.57	15.05	[illegible]
[illegible]	16.50	20.90	4.00	[illegible]	[illegible]	[illegible]	1.50	[illegible]	5.00	4.80	1.65	[illegible]
	9.30	9.41	[illegible]	[illegible]	9.91	.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	9.10	[illegible]	.41	[illegible]	9.32	[illegible]	[illegible]	[illegible]	1.00	9.95	14.70	4.50
	17.24	[illegible]	[illegible]	[illegible]	16.08	1.75	[illegible]	[illegible]	9.00	—	—	—
Rosa	[illegible]	[illegible]	[illegible]	11.23	11.34	.25	[illegible]	[illegible]	[illegible]	15.50	[illegible]	[illegible]

LINE-STRIP DATA SHEET 83.C.2.2.1-19
SHRUB, TREE SEEDLING STRATUM

Project 83

15R100WS33 SWSE

Sheet 2 of 2

Vegetation Type Aspen

Permanent Transect # 3

Date 6/5/78

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
[illegible]	9.10	9.60	.35									
[illegible]	0.00	0.57	1.75	4.03	8.74	3.75	[illegible]	7.21	.63	7.67	8.22	.70
	8.27	10.18	2.00	10.73	12.22	2.50	13.78	16.75				
Prunus	16.25	16.85	2.50	17.10	20.00	3.00						

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QUADRAT DATA SHEET 83.6.2.2.1-20
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Aspen
Transect # 3
Type Perm

T 15
R 100W
S 33
1/4 1/4 S SWSE
Quadrat Size 100m

Aspect (degrees) 357°
Slope (percent) 40%
Elevation (feet) 8520

Field Analyst(s) Koehler, Kestrel
Date 6/5/75

Site Description Mature stand w/ heavy understory
QA Check

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		NA	—	—	—	—	—	—	—	—	—	—
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Carex geyeri	160	2	T			T	T		2.5	T	1.0	.5
Agropyron trachycaulum	54	2	T		.5	2.0	1.5		T	.5	T	T
Unkn. # 1 A3.1	214	2	T					T		T	1.0	
Smilacina sp	119	2	T	T	T	T				T	T	
Erigeron sp.	78	2		T								8.0
Bromus marginatus	610	2				T	.5	.5	T	T		
[illegible]	215	2					T	T				
[illegible] sp.	132	2					2.0	T				
[illegible] sp.	138	2					T					
Valeriana occidentalis A3.2 ~~Unk - 2~~	244 ~~210~~	2						T				
[illegible]	50	2						T				T

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83.C.2.2.1-21

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 85

Sheet 1 of ____

Vegetation Type Aspen Transect # 4 Type NON-PERM

T 2S R 100W S 26 1/4 1/4 S NBSW Transect Length 100 m

Aspect (degrees) 315° Slope (degrees) 20° Elevation (feet) 8140'

Field Analyst(s) Vories and Harding Date 18 July 75

Site Description steep N-facing slope trees bowed at base from snow [illegible] layer QA Check ____

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Populus tremuloides	3	2. 2, rpm	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	very small dia due to breakage
2			5	11	3	4	10	due to snow accumulation
3								Bowed at base
4								
5								

see below

rpm -

Species	Intercepts (m) I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter (cm) of Each Tree. rpm (circles)
Potr	0.00	1.30	2.59	4.73	5.50	7.70	8.70	9.25	Q1: 9, 9, 9 8, 8.5, ~~[illegible]~~
	10.70	11.20	12.45	12.60	16.10	20.00	0.00	10.70	Q2: 11.5, 11, 11, 8.5 ~~[illegible]~~ ~~[illegible]~~
	3.50	3.85	11.75	12.30	13.25	15.70	12.60	20.00	Q2: 18, 11.5, 18.5 13 ~~[illegible]~~ 13.5,
	0.00	2.03	11.70	16.40					Q2: 15, ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ 8.5, ~~[illegible]~~
									Q3: 11, 10 ~~6.5~~ 8.5
									Q4: 14, 15 17 ~~[illegible]~~ ~~[illegible]~~ 10
									Q5: 13, 12 9.5 16, 11 20
									~~[illegible]~~ 10, 10, 18 12.5
									too small - rpm
									Q1: 1 tree
									Q2: 8 trees
									Q3: 1
									Q4: 2
									Q5: 1

Canopy cover on Potr from 20-60%

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83.C.2.2.1-22

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Non-Permanent Transect # 4
tation Type Aspen
Transect Length 100 m
2S R 100W S 26 1/4 1/4 S NE SW
Elevation (feet) 8160'
ct (degrees) 315°
Slope (degrees) 20°
Date 18 July 75
d Analyst(s) Vories and Harding ? rom
QA Check RDM 7/23
e Description

cies	Code #	Phenology Code ? rom	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
Populus tremuloides	3	2	32	34	1	11	8	? [illegible] rom
Amalnifolia	34	5	18	18	45	65	70	GALLS
Sorbus scopulina	13	4	1	3	3	0	0	[illegible] rom
Prunus virginiana	23	5	22	41	85	85	35	GALLS
Syor	33	4	96	34	70	40	85	[illegible] ? rom
Riwoodsia	41	4	37	31	280	245	110	?
Riinerme	44	5	28	60	160	220	60	?
8 [illegible] glabrum	10	5	0	3	0	6	0	?
9 Pachystima myrsinites	do not analyze – SLE	5	0	0	0	0	20	√ ?
0								3

Intercepts (m)

pecies	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Potr	2.84	3.06	9.97	10.48	10.60	10.50	11.30	11.61	11.65	11.73
	11.80	19.20	1.50	2.52	1.90	3.80	3.40	4.60	12.30	13.50
	14.40	14.78	9.60	9.75	11.15	12.40	12.18	13.12	17.20	7.80
	2.00	3.60	5.20	7.70						
Sour	0.13	0.14	1.26	1.33	1.53	2.11	3.12	3.20	3.92	4.02
	5.55	5.66	5.99	6.25	11.05	11.42	11.58	11.90	18.10	18.35
	19.67	20.00	0.00	6.09	2.60	2.72	12.30	12.37	0.00	0.20
Amal	19.70	20.00	0.00	2.30	11.64	11.75	14.90	15.50	16.40	17.35
	17.30	17.80	18.50	19.01	2.80	2.60	3.20	4.30	4.28	5.30
	13.40	13.62	13.93	14.60	0.80	1.70	3.46	4.10	4.15	5.01
Pr vi	12.85	12.03	14.20	14.67	14.90	15.69	15.75	15.83	16.65	17.45
	11.75	11.59	15.40	18.50	19.45	19.61	0.09	0.49	1.23	1.34
	6.35	6.41	7.56	7.71	13.95	14.13	19.00	19.35	5.90	7.25
Row o	0.00	0.23	0.76	0.84	1.72	2.01	3.70	3.78	4.55	[illegible]
Riin	18.02	18.28	18.52	18.70	18.95	20.00	0.00	2.70	[illegible]	11.7
Sorbus Sco[illegible]										

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83.C.2.21-23

2S 100W 26 NESW

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

'egetation Type Aspen
Non-Permanent Transect # 4
Date 18 July 75
RDM 7/23

Intercepts (cm)

pecies	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Orbus scopulin	a									
Rosa woodsii	5.60	5.80	8.60	9.05	10.00	10.10	11.04	11.40	12.65	13.30
	14.80	15.65	16.30	16.61	17.15	17.90	18.00	18.10	18.35	18.60
	0.54	0.80	3.69	3.90	6.90	7.80	8.05	8.20	11.05	11.25
	16.48	16.56								
Pamy	11.40	11.45								
Soyr	5.60	5.80	6.30	6.53	7.21	7.34	11.30	11.40	11.65	11.70
	11.65	11.76	0.65	0.92	3.90	4.08	4.34	4.46	4.63	4.75
	4.83	5.20	6.40	6.80	9.80	9.90	13.25	13.40	15.80	16.00
E[illegible]al	6.10	9.55	9.55	10.05	11.20	11.50	11.85	12.63	12.70	13.50
	15.65	15.70	15.75	17.25	17.60	18.35	19.60	20.00	0.00	6.20
	10.20	10.75	13.13	14.10	14.15	14.78	15.90	16.50	18.50	18.90
	19.35	19.80	0.34	0.40	4.05	4.08	4.40	6.10	7.40	14.50
	16.10	20.00								
Puvi	1.49	2.18	2.32	3.70	4.45	4.87	6.58	6.67	13.70	13.95
	14.20	14.25	14.75	15.50	14.50	15.30	17.20	17.50	19.85	20.00
	0.00	0.50	1.03	2.45	5.60	5.62	5.79	6.06	6.29	7.62
	8.00	11.50	12.05	12.16	14.02	15.10	0.54	0.72	12.22	12.45
	12.70	14.05	17.80	18.20	19.55	19.80	19.95	20.00		
Rowo	7.29	8.10	8.25	8.50	9.42	10.40	10.50	11.60	14.60	14.90
	17.50	17.60	2.50	2.75	2.65	2.95	3.00	3.90	4.57	4.96
Riin	5.90	6.40	8.11	9.40	12.90	13.00	13.45	13.50	13.50	13.70
	14.00	14.40	16.70	16.90	17.90	18.20	18.35	18.50	19.20	19.65
	0.00	0.05	0.60	0.79	1.20	1.35	3.99	4.19	9.70	[illegible]
	12.00	12.45	15.29	15.50	15.90	16.00	16.05	16.10	[illegible]	11.80

83.0.2.2.1-24

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Laid out backwards!

Project 83

Sheet 1 of 1

Vegetation Type Aspen
Transect # 1(5) Type Perm
2S R 100W S 15 1/4 1/4 S NW SW Quadrat Size .5m²
Aspect (degrees) 58 Slope (degrees) 45 Elevation (feet) 8400
Field Analyst(s) Vories Date July 15, 1975
Site Description
QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Chenopodium leptophyllum	286	2	14	2																		
Galium boreale ~~aparine~~	083	3	6	1	8	[illegible]			5	1	16	8	[illegible]	[illegible]	[illegible]	[illegible]	13	8			1	T
Bromus marginatus	066	2		1		1		1		1		5		[illegible]		[illegible]		20				2
Koeleria gracilis ~~Poa pratensis~~	090	2		1		6												4				
Carex geyeri	160	2		2																		
Hackelia floribunda ~~Unknown #1~~ KV	376	2	37	4																	4	6
Solidago sp. KV 3 ~~Caulanthus crass. caulis~~	247	2	[illegible]		4	8	2	6	[illegible]	5			8	15	[illegible]	[illegible]					1	1
Thalictrum fendleri	116	2-5			8	8			1	2			[illegible]	[illegible]	[illegible]	[illegible]			1	T	2	2
~~Ga~~ Viola praemorsa #1 ~~sp.~~	385	2			[illegible]	T					9	10	[illegible]	[illegible]	[illegible]	30	24	40	10	8	28	40
Carex vernacula ~~sp.~~ KV	~~058~~ 281	2-5				2		5		10		4		[illegible]		[illegible]		2				6
Thermopsis ~~Thermopsis~~ montanum	117	2-3					12	20	1	1	1	1							4	6		
Geranium richardsonii	084	4					2	5	6	12	2	2										
Aquilegia caerulea	123	4							14	20												
Valeriana occidentalis ~~Thlaspi montanum~~	294	3							2	4												
Valeriana #2 occidentalis ~~Viola sp.~~	386	2							17	10	5	8										
Osmorhiza depauperata ~~Pseudocymopterus montanus~~	245	4							1	2			[illegible]	[illegible]	[illegible]	[illegible]			76	20	18	10
Potentilla pulcherrima ~~gracilis~~	296	3							[illegible]	[illegible]	7	15										
Solidago sp. ~~Unknown #2~~	130	2									3	4	[illegible]	[illegible]	[illegible]	[illegible]	1	1				
Achillea lanulosa	050	2													[illegible]	[illegible]			5	3		
Smilacina stellata	247	2													2	2					2	2
Collomia linearis ~~Collomia linearis~~	281	2 ~~2~~													[illegible]	7					3	1
Taraxacum officinale	203	2																	2	3		

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T1S, R100W, S33 SW/SE

83.C.2.2 1-25

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type ASPEN
Transect # 3 (6)
Date 21 JULY 75

ORES/BAKER
Permanent

Percent of Total · Each Species

Species	Code #	Phenology Code	Quadrat Number 1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
smoriza depaup.	279	5	31	15	2	T	7	7	13	12	3	3	4	4	5	5	27	10	15	20		
arex geyeri	160	2		4				2		12		6		4		15		6		10		6
llium brevistyle	083	2	4	1	1	T	4	2	1	T	17	7	11	10	10	5	7	4	4	4	8	8
milacina stellata	297	2	2	6	1	T	1	3									4	8	3	6		
halictrum fendleri	116	5	3	5	1	1	4	5			2	1							2	1		
lematis columbiana	298	2					1	2														
elesanthela uniflora	299	2					1	1														
ermaria montana	117	5							5	5	10	10	18	20	9	12	18	18	8	14	1	2
aleriana ocidentalis	294	4							2	4	5	6	6	12	1	1						
stion columbiana	200	2								1		3				5		2				T
ircium sp.	138	3									2	6	4	2								
ium richardsonii	084	4											2	3			1	2				
chillea lanulosa	050	2											1	1								
romus marginatus	066	4												5		3						
[illegible]	123	4																	1	10		
achystima myrsinites	164	2																			15	20

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LINE-STRIP DATA SHEET 83.C.2.2.2-15
MATURE TREE STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Dag Fir Transect # 1 Type Perm.
T 1S R 100W S 28 1/4 1/4 S NE/SE Transect Length 100 m
Aspect (degrees) 310 Slope (percent) 12 % Elevation (feet) 8450'
Field Analyst(s) Pick/Ellis Date 6-3-75
Site Description MOD. DENSE D.F. with quick openings [illegible]
DOM. SHRUB - SYMPH.
QA Check JAW

Species	Code #	Phenology Code	1	2 7	3 7	4	5	Condition
			# in each 6 x 20 m quadrat					
1 Pseudo. menziesii	004	2	6	⑪	⑨	8	3	Leader [illegible]
2								
3								
4								
5								

Intercepts (~~cm~~) M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (~~cm~~) inches of Each Tree (All trees)
P. menziesii	2.63	3.96	2.36	4.15	4.20	8.70	9.03	12.85	9.26, 4.25 15.90
	13.60	19.88	19.25	24.50	1.95	5.81	6.07	15.42	4.50, 14.00, 18.80
	16.00	18.25	15.10	18.40	18.60	20.33	.03	.79	9.00, 4.50, 15.75, 12.75
	.75	3.33	2.75	6.21	5.66	8.18	7.25	10.90	4.5 12.25 15.6.
	10.90	15.65	.04	2.88	5.67	7.83	5.53	9.91	8.9, 9.75 4.25,
	9.76	12.90	14.70	20.75	9.20	11.55	15.98	20.00	5.90, 7.75, 10.90,
									12.9
									17.00, 5.10, 9.7
									7.60 3.75, 8.00,
									3.5, 6.75,
									6.70,
									14.00, 9.40,

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83.C.2.2.2.-16

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Doug. Fir

Permanent Transect # 1

T 1S R 100 W S 28 1/4 1/4 S NE/SE

Transect Length 100 meter

Aspect (degrees) 310°

Slope (percent) 12 %

Elevation (feet) 8450'

Field Analyst(s) Pick / ELLIS

Date 6-3-75

Site Description Mixed aspen stand. shrub - 3 m. understory

QA Check J. Ar

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3*	4	5	Condition
1 Q. gambelii	025	1	12	10	61	9	–	many dead \ [illegible]
2 P. menziesii	004	2	49	21	9	7	13	[illegible]
3 Symphoricarpos oreophilus K.V.	033	1	49	106	79	53	49	[illegible]
4 Amelanchier utah	032	1	16	7	3	9	8	ok [illegible]
5 Rosa woodsii K.V.	CH ~~028~~	1	–	–	3	2	–	ok
6 Artemisia tri	014	2	–	–	–	–	4	ok
7 Chrysothamnus	020	1	–	–	–	–	4	ok
8 viscidiflo								
9								
10								

Intercepts ~~(cm)~~ M

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Q. gambelii	0.40	1.84	12.1	.85	.89	.05 ✓	11.45	15.30	4.1 ✓	16.80	15.75	[illegible]
	17.05	17.29	0.25	17.61	17.96	.52	18.39	19.51	.10	18.08	19.02	.75
	.01	.18	.15	3.65	3.77	.16	5.96	6.11	.19	6.75	6.69	.08
	7.19	7.31	.21									
P. menziesii	2.10	2.93	.75	3.97	4.56	.41 ✓	8.54	9.70	1.20	0.14	0.93	1.2
	1.94	3.63	3.5	7.85	10.25	8.25	10.26	10.91	7.5	2.10	3.01	2.2
	9.41	10.03	1.25									

* Q. gambelii reflects sprouts in opening.

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83.C.2.2.2-1+

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM
T R S
15, 100W, 28 (NE/SE)

Project 83

Sheet 2 of 2

Vegetation Type D. Fir Permanent Transect # 1 Date 6-3-75

Species	I1	I2	Dia M	I1	I2	Dia M	I1	I2	Dia M	I1	I2	Dia M
Symph. occi.	3.72	4.20	.18	4.45	4.72	.50	5,10	5.33	.33	8,02	8.56	,20
I II	10.61	10.84	.07	13.22	13.48	,79	13.93	14.50	.54	17.20	18.80	1.55
	19.42	19.99	.75	1.59	2.16	.19	3.27	3.34	,95	3.81	4.0	.15
	4,39	4.89	.27	5.41	5.74	.11	8.69	8.86	.07	9.30	9.51	,05
	11.03	11.12	.04	17.10	17.29	,18	1.42	1.69	.13	3.87	4.02	.07
	4.48	4.82	.10	5.31	5.65	.20	9.14	9.45	.09	.85	1.02	.17
	4.60	4.78	.20	6.91	7.12	.05	13.35	13.61	.25	14.85	14.94	.15
	17.65	17.99	.21	0.44	0.66	.07	4.55	5.02	,03	7.80	8.75	1.1
Amelanchier utah.	7.18	7.90	.75	12.2	13.54	10,3	5.45	6.81	3.2	15.02	17.00	14.25
	7.52	8.75	10.60	9.90	10.99	3.6	12.13	14.05	14.75	13.83	14.39	3.25
	19.28	19.43	1.5	8.80	11.11	13.50	10.91	15.90	26.55			
Chrysothamnus vicis.												
	3.25	3.36	.08									

K.V. 994
720
274

401
360
41

QUADRAT DATA SHEET
HERBACEOUS STRATUM

83.C.2.2.2-18

Project 83

Sheet 1 of 1

Vegetation Type Douglas Fir Transect # 1 Type PERMANENT

T 1S R 100W S 28 1/4 1/4 S NE SE Quadrat Size .5m²

Aspect (degrees) 310 Slope (percent) 12 Elevation (feet) 8450'

Field Analyst(s) ELLIS / PICK Date 3 June '75

Site Description Mixed con. stand, tall shrub ~3m.) undulating QA Check J Aw

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA									
Species	Code #	Phenology Code										
Carex geyeri	160	2	4	1	1	2	1.5	4	6	T		0
Achillea lanulosa	050	2	T									
Mahonia repens	161	2	T									
Lithospermum ruderale	162	1									T	
Bromus sp	183	2									T	
Astragalus tenellus ~~sp~~ K.V.	282 ~~062~~	1									T	
Carex geyeri ~~Carex sp~~ K.V.	180 ~~068~~	2									T	

83.C.2.2.2-19

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

OFF-TRACT

Sheet 1 of 1

Vegetation Type Douglas Fir Transect # 2 Type NON-PERM.

T 2 S R 100 W S 4 1/4 1/4 S NE/NE Transect Length 100 m

Aspect (degrees) 330° Slope (percent) 40 % Elevation (feet) 8500'

Field Analyst(s) ELLIS / Pick Date 6-3-75

Site Description D. Firs grouped lower strata hvy. at times sev. over-mat. / most middle aged QA Check J Ahr

Much D. Fir regen. Sev. blow down areas

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pseudotsuga menziesii	004	2	12	5	4	5	4	leaders frost killed
2								
3								
4								
5								

Species	Intercepts ~~(cm)~~ meters I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
P. menziesii	.80	3.80	3.75	6.46	6.51	8.60	3.32	8.33	8.0, 13.0, 14.0, 22.0
	8.80	9.70	1.31	3.11	8.50	15.34	16.26	18.65	19.0, 7.5, 8.0, 8.0, 21.0
	3.14	5.98	12.50	16.11	14.54	20.95	1.16	2.21	19.0, 22.0, 14.0,
	7.43	11.25	1.95	9.04	9.60	11.62	12.61	15.35	
	19.49	20.00							24.0, 21.0, 23.0,
									35.0, 13.0
									10.0, 23.0, 14.0, 35.0
									9.0, 12.0, 10.0, 10.0,
									7.5.
									30.0, 21.0, 16.0, 7.5

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83.C.2.2.2-20

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type D-Fir
NNP-Permanent Transect # 2
25 R/[illegible] S [illegible] 1/4 1/4 S NE/NE Transect Length 100'
Aspect (degrees) 330° Slope (percent) 40% Elevation (feet) 8500'
Field Analyst(s) Ellis / Pick Date 6-3-75
Site Description see [illegible] sheet QA Check J [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Symp. oreo [illegible]	033	1	67	41	46	29	40	[illegible]
2								
3 Prunus Virgin	023	1	9	5	7	9	3	"
4 Acer glabrum	010	1	-	-	-	-	4	"
5 Amel. utah	032	1	1	-	3	-	3	"
6								
7 P. menziesii	004	2	8	6	43	20	75	frost [illegible]
8 Rosa woodsii [illegible]	041 ~~028~~	1	-	12	6	4	21	-
9								
10								

Intercepts ~~(cm)~~ Meter

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Symp.	.20	.61	N/A	1.21	1.48	N/A	12.50	13.15 ✓	N/A	15.01	16.69	N/A
	19.42	19.06		0.65	1.12		2.67	3.11		3.30	3.96	
	6.21	6.94		7.10	7.59		10.30	10.35		10.47	10.63	
	11.11	11.23		11.54	11.63		11.81	12.21		12.45	12.51	
	12.63	13.10		15.89	16.72		2.60	3.12		3.59	3.81	
	1.04	1.57		6.60	6.66		14.40	14.90		15.39	16.07	
	16.82	17.01		5.70	6.09		7.10	7.35		9.73	9.97	
	13.33	10.89		5.85	6.11		10.30	10.41		11.58	11.70	
	11.70	12.00		12.10	12.35		13.30	13.61		13.92	14.00	
	14.40	14.90		17.35	17.50							
Pru.	1.60	1.95		14.0	14.72		16.50	16.58		19.10	[illegible]	
	19.90	20.00		5.02	5.41		7.42	7.54		7.79	8.01	
	13.0	14.20		18.60	19.10		7.32	7.59				
P. menziesii	8.60	8.90		8.35	9.70		17.40	18.65	8	18.70	20.01	
	10.08	10.10		14.9	15.06		5.31	5.73		10.53	11.38	
	12.33	13.14		3.78	3.84							

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LINE STRIP DATA SHEET 83.C.2.2.2-21
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

T23, R100W, S4 (NE/NE)
Non-Permanent

Vegetation Type Douglas Fir
Transect # 2
Date 6-3-75

Intercepts ~~(cm)~~ Met

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Amelanchier	15.30	16.60	1.70	2.56	2.90	3.20	4.40	4.99	.75	2.48
utahensis	15.69	15.78	19.50	20.00						
Rosa ~~sp.~~ woodsii K.V.	17.80	17.96	18.30	18.39	8.01	8.04				
Acer glabrum	7.51	10.36	16.53	16.91	16.94	17.71				

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83.C.2.2.2-22

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83
Sheet 1 of 1

Vegetation Type D. Fir Transect # 3 Type Perm.
T 2S R 100 W S 15 1/4 1/4 S NE/SW Transect Length 100 M.
Aspect (degrees) 235° Slope (percent) 35% Elevation (feet) 8375
Field Analyst(s) R.L. / [illegible] Date 6-4-75
Site Description QUADRAT (SW) [illegible] QA Check J Aus

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 P. menziesii	004	2	4	8	2	6	1	[illegible] [illegible]
2								
3								
4								
5								

Species	Intercepts ~~(cm)~~ M I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
P. menziesii	0.30	2.40	3.83	5.72	8.97	11.64	1.75	7.93	8, 11, 26, 8
	2.46	3.75	4.82	6.59	6.60	9.18	8.37	11.0	
	11.0	15.27	15.18	17.30	18.68	20.45	15.10	15.49	10.5, 9.0, 11.5
	18.05	19.34	18.10	21.70	9.15	13.66			11.0, 9.0, 32.0,
									10.0, 32.0
									10.0, 15.0,
									13 14, 10, 15, 16, 15
									14

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83. C. 2. 2. 2-

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type D. Fir

Permanent Transect # 3

T 7S R 100W S 15 1/4 1/4 S NE/SW

Transect Length 100 m.

Aspect (degrees) 335°

Slope (percent) 35 %

Elevation (feet) 8375

Field Analyst(s) Pick / Ellis

Date 6-4-75

Site Description [illegible] brush 2 m. [illegible]

QA Check [illegible]

D. fir reg. [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pseudotsuga [illegible]	004	2	31	44	41	16	06	[illegible]
2 [illegible]	032	1	14	5	11	12	10	none
3 P[illegible]	023	1,2	4	~	9	49	11	"
4 S[illegible]	033	1	30	9	8	16	46	"
5 [illegible] woodsii	041 ~~028~~	1	17	6	10	-	-	"
6 [illegible]	010	1	4	5	8	5	~	"
7								
8								
9								
10								

Intercepts (cm) M

Species	I_1	I_2	Dia M	I_1	I_2	Dia M	I_1	I_2	Dia M	I_1	I_2	Dia M
D[illegible]	3.65	2.11	.86	3.0	3.72	1.70	12.90	13.15	2.0	14.19	14.58	1.1
	14.77	15.23	.50	16.47	16.63	2.6	19.10	19.12	.45	1.00	1.87	[illegible]
	3.97	4.21	2.1	3.31	3.52	.10	4.04	4.14	.25	4.50	5.29	3.1
28	7.0	7.63	5.3	7.97	8.02	.02	10.69	11.17	1.50	11.12	11.85	1.4
	12.20	12.31	3.1	13.04	13.77	1.4	18.20	18.91	1.55	0.34	1.14	2.9
	1.51	1.77	.23	1.65	3.31	4.7	3.40	3.86	1.5	5.32	5.63	.50
	13.57	13.31	3.0	17.34	18.36	1.1	16.70	18.29	3.40	10.36	11.52	1.4
[illegible]	2.91	2.92	.33	9.91	10.15	.84	15.33	15.[illegible]	3.5	16.20	16.72	.75
	6.05	6.53	5.7	7.30	9.02	3.20	11.02	12.61	3.3	15.77	15.75	.75
	16.39	17.27	14.6	17.73	18.17	.30	17.92	18.91	2.5	17.97	18.54	1.1
	13.11	20.22	2.6	5.[illegible]	[illegible]	[illegible]	5.70	5.57	2.5	5.31	[illegible]	[illegible]
	8.37	7.00	.33	9.01	3.33	3.45	3.35	2.0	3.0	3.91	5.14	2.7
	4.70	5.48	3.75	5.05	5.25	1.3	6.73	8.79	2.55	14.0	[illegible]	.65
	11.82	2.37	3.6	12.63	13.25	1.1	17.63	17.52	.45			

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83.C.2.2.2-24

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

25 100W S15 NE/SW

Project 83

Sheet 2 of 2

Vegetation Type D. Fir Permanent Transect # 3 Date 6-1-75

Species	I_1	I_2	Dia M	I_1	I_2	Dia M	I_1	I_2	Dia M	I_1	I_2	Dia M
Prun. virginiana	3.42	3.58	.17	6.59	7.19	.95	—	—	—	7.68	7.97	[illegible]
	8.21	8.39	.46	13.2	13.24	1.20	13.33	17.05	4.3	18.70	19.55	3.1
	9.41	9.81	1.5	9.85	11.29	1.87	11.25	11.98	1.0	11.51	12.50	.93
	13.33	13.72	.56	16.02	16.25	.20	19.52	20.11	.79	1.63	2.38	1.1
	3.79	4.11	2.2	15.55	15.83	.50	14.92	14.94	.33			
[illegible]												
	9.59	9.98	.5	13.07	13.31	.15	[illegible]	[illegible]	.20	17.90	17.84	.20
	3.61	3.63	.04	9.75	8.86	.19	9.07	9.38	.55	3.16	3.51	.25
	—	—		1.50	1.71	.17	1.85	1.96	.20	4.05	4.10	.20
	5.11	5.74	.77	6.11	6.32	11	5.00	5.19	.18	8.62	8.70	.21
	12.88	12.17	.15	14.81	4.95	.13	15.38	16.21	.55	17.71	17.92	.25
Rosa woods.	3.91	3.92	.03	5.97	6.05	.08	9.30	9.34	.04	10.70	10.71	.01
	—	—	—		—			—		4.61	4.72	.10
	6.32	6.34	.05									
Acer glabrum	7.54	7.99	1.23	13.86	14.50	1.1	13.32	13.75	1.20	4.59	4.57	.65
	11.82	13.89	13.5	—	—							

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93.C.2.2.2-25

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type D. Fir Transect # 3 Type Pesm

2S R 100W S 15 1/4 1/4 S NE/SW Quadrat Size .5m²

Aspect (degrees) 335° Slope (percent) 25 Elevation (feet) 8375

Field Analyst(s) [illegible] Date 6-4-75

Site Description QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species		NA	—	—	—	—	—	—	—	—	—	—
Species	Code #	Phenology Code										
[illegible]	160	2	8	4		1	10	10	5	4	10	20
Pachistima myrsinites	164	2	1	6	5	4	1		8		1	
[illegible]	118	2		+								
Mahonia repens	161	2			3							

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83.C 2.2.2-26

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

tation Type Douglas Fir Transect # 4 Type NON-PERM

 2S R 100W S 34 1/4 1/4 S SWNE Transect Length 100 m

spect (degrees) 290 Slope (degrees) 37° Elevation (feet) 8350'

ield Analyst(s) Vories + Harding Date 18 July 75

ite Description steep Western slope, extreme soil erosion QA Check RDM 7/23

mounding of soil around trees
Shrub layer: sparse → fair cover
herbaceous: sparse

Species	Code #	Phenology Code	1	2	3	4	5	Condition
			# in each 6 x 20 m quadrat					
1 Doug f. - PSME	4	.2 ? rdm	[illegible]	[illegible]	[illegible]	~~4~~	[illegible]	SOME EVIDENCE OF ATTACK OF
2			3	5	11	3	7	BEETLES, MINOR
3								CHEWING BY
4								PORCUPINES
5								OCCASSIONAL EVIDENCE OF FIRE

AT BASES AND DEAD TRUNKS

rdm see below

Species	I$_1$	I$_2$	I$_1$	I$_2$	I$_1$	I$_2$	I$_1$	I$_2$	Trunk Diameter (cm) of Each Tree
	Intercepts (m)								
Psme	7.55	7.70	13.02	13.42	1.80	4.15	5.87	8.01	rdm (circles) Q1: 11, 8,
	11.98	13.75	5.20	10.20	11.10	17.40	4.50	9.89	10.5
	3.30	10.70	11.00	13.65	14.20	20.00			Q2: 10.5, 33, 8, 8.5,
									20
									Q3: 17, 35.5, 10, 13,
									11.5, 10.5, 19, 14, 18, 19.5, 17
									Q4: 19.5, 26, 8.5,
									Q5: 24.5, 19.5, 22.5, 11, 17.5,
									19, 29,
									Too small: rdm
									Q1: 5 trees
									Q2: 4 trees
									Q3: 2 trees
									Q4: ~~4?~~ 1 tree
									Q5: 1 tree

TREES SLIGHTLY BOWED AT BASE FROM SOIL CREEP

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83.C.2.2.2-2?

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 3

Vegetation Type Doug fir
Non-Permanent Transect # 4
T 2S R 100W S 34 1/4 1/4 S SWNE
Transect Length 100 m
Aspect (degrees) 290
Slope (degrees) 37°
Elevation (feet) 8350'
Field Analyst(s) Varies and Harding
Date 18 July 75
Site Description on 1st sheet ? rdm
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Ribes cerium	42	5 ? rdm	3	4	2	6	6	[illegible]
2 Sior	33	4	47	93	64	52	67	GALLS
3 Cemo	17	5	2	0	0	1	0	[illegible] rdm
4 Oyor	25	5	103	0	0	0	0	[illegible] rdm
5 Amut	32	5	55	32	54	32	39	GALLS
6 Pachystima myrsinites *		5	8	18	51	37	32	[illegible] rdm
7 Psme	4	2	14	15	17	10	5	? rdm
8 Rosa woodsii	41	4	1	0	0	0	0	?
9 Amal	34	5	0	2	0	0	0	?
10 Sambucus Caerulea	48	4,5	0	1	1	0	0	?

Intercepts (m)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Amut	0.00	0.19	7.79	8.42	9.10	9.55	10.28	10.60	12.55	13.[illegible]
	14.03	14.29	14.95	15.02	16.43	16.88	17.24	17.52	18.63	18.96
[illegible]	19.25	20.00	0.30	1.19	7.89	7.91	8.46	8.80	9.28	9.95
	13.30	13.36	13.49	14.02	14.43	14.50	14.89	14.93	15.69	16.02
	16.62	16.87	2.40	3.69	3.84	4.20	4.34	4.37	4.59	4.62
Oyor	2.91	2.95	3.84	3.87	3.93	4.04	4.63	4.86	6.06	6.15
	9.12	9.38	9.40	9.60	10.00	10.35	10.60	10.90	11.25	11.50
	11.51	11.75	11.93	12.20	12.39	12.55	13.05	13.10	13.41	13.70
	13.34	13.51	14.71	15.56	18.95	19.40	19.67	19.92	0.00	0.22
More	12.64	12.80	6.74	6.78	8.93	10.02	13.51	13.86		
Rice	17.85	18.77	4.90	5.41	8.35	8.41	17.50	18.20	19.26	19.46
Sior	6.02	6.05	11.05	11.17	15.82	15.87	16.38	16.42	0.22	0.30
[illegible]	15.95	16.22								
Pamy	12.79	12.86	3.32	3.37	6.73	6.75	6.90	6.93	17.48	17.50
[illegible]	[illegible]	13.40	0.73	1.00	10.00	10.35	1.69	2.22	[illegible]	[illegible]

* treated in herb. stratum - do not analyze!

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83.C.2.2.2-28

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 3 of 3

Vegetation Type Doug fir
Non-Permanent Transect # 4
T 25 R 60W S 34 1/4 1/4 S SWNE
Transect Length ?, ok 1001x
Aspect (degrees) 240
Slope (degrees) 37°
Elevation (feet) ?, ok 8350
Field Analyst(s) Vories + Harden
Date 18 July 75
Site Description See 1st sheet ?, rrm
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Holodiscus dumosus	35	4 ?, rrm	0	0	1	4	11	?, normal
2 ~~Mahonian repens~~		~~A 5~~	~~0~~	~~20~~	~~26~~	~~6~~	~~16~~	
3 Chrysothamnus nauseosus	19	3	0	0	0	1	0	
4		treated in						
5		herbaceous stratum						
6		- do not evaluate						
7		10						
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2

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2S 100W 34
SWNE

83.C.222-29

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 3

Vegetation Type Doug fir
Non-Permanent Transect # 4
Date 18 July 75
RDm 7/23

Intercepts (cm)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Syor	3.25	3.38	3.49	3.59	3.72	3.84	3.89	4.36	4.47	4.53
	5.85	5.88	6.07	6.14	7.05	8.72	9.78	9.86	10.36	10.86
	10.91	11.02	14.00	14.15	14.29	14.48	14.79	14.90	15.64	15.86
	16.11	16.15	16.32	16.62	17.52	17.80	18.16	18.21	18.39	18.93
	19.06	19.18	4.15	4.24	5.90	6.41	7.85	8.17	8.30	8.53
	11.18	11.30	11.41	11.69	11.80	11.95	13.23	13.37	14.45	14.58
	16.64	16.80	0.60	0.82	0.99	1.18	9.78	9.86	12.48	12.85
	17.32	17.49	17.71	17.74	18.77	18.94	19.08	19.17	19.61	19.64
	19.72	19.75	3.33	3.59	3.70	3.76	3.89	4.02	10.60	11.00
	15.16	15.35	19.44	19.78	19.95	20.00				
Psme	3.35	4.09	5.40	6.21	18.55	18.90	19.06	19.10	6.45	6.53
Amut	5.50	7.85	9.79	9.83	10.65	11.01	11.38	11.68	6.29	6.37
	11.39	12.99	13.60	13.83	13.84	15.33	3.76	3.78	9.29	9.48
	9.45	9.68	10.20	10.43	10.72	11.33	11.70	11.79	13.30	14.95
Pamy	9.98	10.04	10.44	10.52	10.56	10.70				
Hodu	2.80	3.08								
Quga										
China	7.82	8.21								
Rice	8.01	8.03								
[illegible]	12.57	12.63	3.01	3.15	6.08	6.10	8.50	8.53	4.09	4.19

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T5, R100W, S28, NE/SE

83.C.2.2.2-30

QUADRAT DATA SHEET

HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Douglas Fir

Transect # 1 (5)

Date 21 July 75

RIES / BAKER

Permanent

Percent of Total · Each Species

			Quadrat Number																	
			1		2		3		4		5		6		7		8		9		10	
Species	Code #	Phenology Code	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
thiccomum rudr.	162	6																	2	4		
Poa tenellus	282	2	9	12	2	3	3	6	1	1					3	4			6	10		
Zizia columbiana	300	5										T								6		
Carex geyeri	160	2		12		1		2		5		5		15		20		3		4		
Tarax. offic.	203	2																	1	1		
Achill. millef.	299	2																	3	2		
Thermum montan.	117	2													1	2						
lditrum Porteri	116	2													31	25						
rigeron coccineum	275	2	1	1							2	2			1	1						
Geranium ~~fo~~	~~166~~	4								3												
Galium boreale	083	2			27	10			1	1												
[illegible] acuminata	243	2					1	1														
Stellaria longipes	050	2	12	10																		
Mahonia repens	161	2	1	2																		

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83.C.2.2.2.31

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Douglas Fir
Transect # 3(6)
Type Permanent

T. 2S R 100W S 15 1/4 1/4 S NE SW Quadrat Size .5m²

Aspect (degrees) 335 Slope (degrees) 35 Elevation (feet) 8375

Field Analyst(s) Vories Date July 15,1975

Site Description

QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Aquilegia caerulea	123	3	3	10																		
Thalictrum fendleri	116	2	15	25									4	2					9	12		
Galium boreale	083	2	1	T									1	T			1	1	1	1	2	1
Carex geyeri	160	2		10		4		4		4		15		18		6		4		25		50
Koeleria gracilis ~~[illegible]~~	090	2				1																
Viola adunca	303	2					1	1					2	4	1	T			3	2	2	2
Vicia americana	304	7							1	T			7	10			6	4			6	8
Osmorhiza depauperata ~~[illegible]~~	279	2									1	T	15	15			4	3	2	4		
=Umb a 2 for A.1 Solidago sp.	130	2											11	12							13	10
Smilacina stellata	207	5													1	4						
Chenopodium fremontii	198	2															10	6				
Bromus marginatus	066	4																1		T		
Achillea lanulosa	350	2																			2	1

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LINE-STRIP DATA SHEET 83.C-2.2.3-15

SHRUB, TREE SEEDLING STRATUM

55242
360
192

Project 83
Sheet 1 of 2

Vegetation Type Greasewood
Non-Permanent Transect # I
T 1S R 93W S 7 1/4 1/4 S SW/NW
Transect Length 100m
Aspect (degrees) 40°
Slope (percent) 2° 3%
Elevation (feet) 6400
Field Analyst(s) Turner / Pick
Date 6/1/75
Site Description Bottomland - [illegible] plants
QA Check J Otis

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Atca	14	2	133	149	129	113	124	[illegible]
2 Save	29	2	47	107	103	94	104	" "
3								
4								
5								
6								
7								
8								
9								
10								

Intercepts (~~cm~~) meter

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Atca	0.44	1.11	1.3	2.00	3.40	3.41	5.23	5.38	6.75	7.00
	7.43	7.15	3.70	3.35	11.21	11.32	11.71	11.72	12.03	[illegible]
	13.02	13.14	13.15	14.0	14.64	[illegible]	16.28	16.40	16.53	16.[illegible]
	17.33	17.62	13.15	13.[illegible]	0.00	0.03	1.10	1.33	2.03	[illegible]
	2.79	3.09	4.60	[illegible]	5.15	5.[illegible]	6.95	7.01	7.32	7.40
	8.52	8.91	9.03	9.15	10.47	10.80	11.20	11.45	11.55	11.[illegible]
	12.33	12.51	14.44	15.00	15.05	15.3[illegible]	16.04	16.20	16.33	17.[illegible]
	17.45	18.14	18.30	18.48	18.43	18.72	(Con	t on	[illegible]	)
Save	9.24	9.62	11.28	11.31	15.40	15.42	11.03	11.22	3.10	3.[illegible]
	3.70	4.15	4.68	4.95	5.22	5.79	10.80	11.14	11.50	11.[illegible]
	14.95	15.23	15.40	15.60	17.23	18.10	13.03	13.35	19.03	19.[illegible]
	0.86	0.39	3.35	3.90	4.29	4.75	4.30	5.29	7.31	[illegible]
	7.43	8.29	9.63	10.05	11.05	11.[illegible]	11.75	12.25	14.33	15.[illegible]
	15.63	15.70	17.32	17.75	14.33	14.20	14.30	17.63	1.35	2.[illegible]
	0.70	1.35	2.13	2.45	3.43	3.42	5.69	5.38	6.21	6.41
	6.72	7.01	7.50	7.77	8.50	8.30	1.35	10.61	11.05	11.10
	15.00	15.15	15.40	15.90	17.35	17.12	(cont	next p	g. →	)

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83.C.2:2.3-16

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM
1S 98W S7 SW/NW

Project 83
Sheet 2 of 2
Vegetation Type Greasewood
Non-Permanent Transect # 2
Date 6/1/78

Intercepts ~~(cm)~~ meters

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Arta	12.93	19.41	0.30	0.49	0.63	1.05	2.93	3.50	4.53	4.[illegible]
	5.01	5.50	1.15	1.46	6.33	6.43	12.35	12.72	12.93	13.03
	14.45	14.92	15.05	15.26	2.35	2.40	2.95	3.15	3.42	3.80
	4.35	4.62	5.02	5.10	7.73	7.77	8.32	8.44	10.30	10.60
%	12.55	12.95	13.20	13.55	15.00	15.25	16.04	16.80	17.32	17.38
[illegible]	19.40	19.[illegible]	0.40	0.45	0.55	2.35	3.60	4.02	4.60	5.23
	9.30	9.99	11.75	12.01	12.30	13.11	13.19	13.32	14.87	15.[illegible]
	16.91	17.03	17.85	18.02	18.49	18.[illegible]	19.42	19.60		
Sove	0.60	1.23	3.25	3.52	6.76	7.[illegible]	7.70	8.14	8.38	9.10
	11.31	11.52	13.41	13.65	13.81	14.34	16.13	16.35		

LINE-STRIP METHOD 83.C.2.2.3-17
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Greasewood
Permanent Transect # 2
T 25 R 99 W S 8 1/4 1/4 S NWSE
Transect Length 100 m
Aspect (degrees) 275°
Slope (percent) 8%
Elevation (feet) 7000
Field Analyst(s) Koehler, Varies, Kestrel
Date 6/3/75
Site Description [illegible] stand on alluvial wash interspersed w/ Rabbitbrush & Sage
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Sarco vermiculatus	29	2	46	62	40	36	52	normal
2 Chry nauseosus	19	2	107	75	33	81	66	normal
3 [illegible]	14	2	2	8	12	2	9	[illegible]
4 [illegible]	16	2		8	16	5	7	normal
5 Chry. viscidiflorum	20	2				1		↓
6 ~~[illegible]~~		~~2~~				~~6~~		↓
7								
8								
9								
10								

Intercepts ~~(cm)~~ meters

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Sarcobatus vermiculatus	0.08	0.82	.53	3.33	3.93	.49	7.13	8.25	1.20	9.27	9.67	.50
	10.20	10.30	.10	4.10	4.35	.31	14.60	15.17	.80	15.15	15.55	[illegible]
	[illegible]	16.55	.40	16.80	16.95	.15	17.85	[illegible]	.35	19.80	[illegible]	[illegible]
	2.50	[illegible]	[illegible]	[illegible]	5.84	.34	5.41	[illegible]	.95	6.13	6.22	[illegible]
	[illegible]	[illegible]	2.30	[illegible]	[illegible]	1.75	10.10	[illegible]	3.00	[illegible]	13.10	[illegible]
	18.41	19.25	.84	[illegible]	[illegible]	[illegible]	1.02	2.14	.87	7.12	[illegible]	[illegible]
	3.30	[illegible]	.25	11.10	11.20	.10	11.10	[illegible]	1.50	15.60	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	3.58	4.14	.49	4.65	6.08	.64	9.10	9.12	[illegible]
	10.53	11.46	.93	[illegible]	19.15	.20	18.92	19.02	[illegible]	0.91	2.36	[illegible]
Chrysothamnus nauseosus	[illegible]	1.25	.37	1.40	2.05	.74	[illegible]	[illegible]	.17	3.12	3.42	.31
(cont next	4.08	4.10	1.50	5.10	5.11	.34	[illegible]	6.31	.20	6.65	6.99	[illegible]
page)	[illegible]	[illegible]	.40	[illegible]	[illegible]	.20	9.69	[illegible]	[illegible]	13.92	[illegible]	[illegible]
	[illegible]	19.25	.21	[illegible]	2.98	[illegible]	[illegible]	[illegible]	.10	[illegible]	[illegible]	[illegible]
	[illegible]	19.10	[illegible]	[illegible]	4.52	[illegible]	[illegible]	[illegible]	.32	0.94	1.32	[illegible]
	6.54	6.76	.29	[illegible]	7.92	.38	9.08	9.91	.43	10.11	10.19	[illegible]
	12.05	12.30	.30	12.80	12.92	.20	15.05	15.35	.35	13.11	[illegible]	

CONT NEXT PAGE

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LINE-STRIP DATA SHEET 83.C.2.2.3-18
SHRUB, TREE SEEDLING STRATUM

T2S R99W S8 NWSE

Project 83
Sheet 2 of 2

Vegetation Type Greasewood Permanent Transect # 2 Date 6/3/75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Arte tridentata	1.50	1.74	1.10	4.01	4.13	.10	5.60	6.04	.35	14.10	14.50	.75
	15.40	16.20	.56	2.78	3.67	.74	3.74	4.97	.69	5.31	5.58	.45
	8.05	9.15	1.10	16.45	16.80	.35	8.07	8.40	.40	15.55	16.15	.55
Atrip confertifolia	.96	1.40	43									
Chry [illegible]	16.00	16.35	.20	16.80	16.85	.30	[illegible]	[illegible]	.29	11.59	11.85	.05
Sarc vermiculatus	1.13	1.60	.80	2.10	4.07	1.75	4.45	5.54	1.10	7.26	8.72	.90
	11.75	12.25	1.50	14.[illegible]	16.33	1.50	16.60	17.60	1.00	17.95	18.30	1.00
	18.70	19.70	1.00									

QUADRAT DATA SHEET 83.C.2.2.3-19
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Greasewood Transect # 2 Type Perm

2S R 99W S 8 1/4 1/4 S NWSE Quadrat Size 100 m

Aspect (degrees) 275° Slope (percent) 8% Elevation (feet) 7000

Field Analyst(s) Koehler, Vories, Kestrel Date 6/3/75

Site Description Mature stand on alluvial wash QA Check [illegible]

interspersed with rabbitbrush & sage

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		NA	—	—	—	—	—	—	—	—	—	—
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Bromus tectorum	67	2	1.0	3.0	T	9.0	.5	4.0			10.	T
Chenopodium fremontii	198	2	5.0	3.0	1.0	2.0	1.0			2	.5	
Descurainia ~~[illegible]~~ pinnata	~~73~~ 255	3	3.0	4.0		2.0	4.0	1.0			.5	5.
32.1 Lappula redowskii Voucher-34	199	2		T			T	.5	T			T
[illegible] sp.	166	2										
[illegible]	52	2							7.5			T
[illegible]	200	2									1.0	1.5

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LINE-STRIP METHOD 83.C.2.2.3-20
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Greasewood
Permanent Transect # 3
T [illegible]S R 98W S 21 1/4 1/4 S SW1/4NW
Transect Length 100 m
Aspect (degrees) 182°
Slope (percent) 1%
Elevation (feet) [illegible]
Field Analyst(s) Vories Kobler Kestand
Date 6/4/75
Site Description Bottomland invaded w/ Crested wheatgrass [illegible]
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Sarco vermiculatus	29	2	45	39	33	44	49	Fair
2 Art. tridentata	14	2	2	2	4	64	32	Fair
3 Ch. nauseosus	19	2	1	11	7	2		Fair
4 Ch. viscidiflorus	20	2	-	1	-	1	-	Fair
5								
6								
7								
8								
9								
10								

Intercepts ~~(cm)~~ meters

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Sarco. vermiculatus	1.70	1.95	.13	5.75	6.08	.75	6.78	[illegible]	.40	9.60	[illegible]	[illegible]
	14.29	14.52	.20	12.35	[illegible]	.78	2.90	3.14	.38	5.21	5.50	[illegible]
	7.34	7.82	.36	11.51	11.54	.37	12.80	12.81	.72	2.02	[illegible]	[illegible]
	2.50	3.92	.31	[illegible]	[illegible]	1.25	12.36	12.78	.54	[illegible]	[illegible]	[illegible]
	1.86	3.40	1.35	4.56	5.10	.49	6.13	6.14	.15	7.89	[illegible]	[illegible]
	9.50	9.64	.70	12.68	13.53	.78	17.07	13.55	.45	18.05	[illegible]	1.2
	18.32	19.65	.82	[illegible]	1.84	.90	3.90	4.11	.69	5.89	[illegible]	[illegible]
	9.59	9.84	.34	11.52	12.00	.65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	15.00	[illegible]	1.00	16.85	18.03	1.00						
Chry. nauseosus	0.20	0.25	.4	[illegible]	[illegible]	.25	12.01	[illegible]	.32			
~~[illegible]~~	~~4.12~~	~~[illegible]~~	~~.34~~									
Art. tridentata	19.52	19.73	.16	12.96	13.34	.35	3.53	4.50	.71	11.76	[illegible]	.90
	9.88	10.01	.19									

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QUADRAT DATA SHEET 83.C.2.2.3-21
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Greasewood
Transect # 3
Type Perm
T 2S R 98W S 21 1/4 1/4 S SWNW
Quadrat Size 100m
Aspect (degrees) 182°
Slope (percent) 1°
Elevation (feet) 6250
Field Analyst(s) Kubler V[illegible] Vertrees
Date 6/4/75
Site Description Bottomland reseeded w/ Crested wheat
[illegible]
QA Check J. Aus

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		NA										
Percent of Total · Each Species												
Species	Code #	Phenology Code										
1. Agropyron [illegible]	53	2	.5									
2. Descurainia ~~sp~~ pinnata K.V.	~~75~~ 153	3	5.0	3.0	2.0	2.0	1.0	.5	T	1.0		
3. C[illegible]	198	3		2.0	3.	12.5	T	15.0	T	1.0	2.0	
4. [illegible]	199	3	20.0	12.5	20.	8.5	6.0	20.0	T	2.0	3.0	
5. Agropyron smithii	52	2				2.0						
6. Lepidium sp	92	2							T	T		
7. A[illegible] G3.1 desertorum	51	2		3.0	4.0	2.0	5.0	5.0	12.5	8.0	11.0	20.0

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LINE-STRIP METHOD 83.C.2.2.3-22
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Greasewood
Permanent Transect # 4
2S R 99W S 12 1/4 1/4 S SENW
Transect Length 100m
Aspect (degrees) 93°
Slope (percent) 2%
Elevation (feet) 6450
Field Analyst(s) Kobler Varis Kochel
Date 6/4/75
Site Description [illegible]
QA Check J Aro

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 [illegible]	29	2	76	65	73	99	111	normal
2 [illegible]	14	2	—	–	–	2	4	normal
3								
4								
5								
6								
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
[illegible]	1.26	1.92	.68	2.92	[illegible]	.39	3.94	5.33	1.39	6.57	[illegible]	[illegible]
	7.10	8.65	1.00	8.88	9.50	.36	11.15	11.64	.48	12.07	12.75	[illegible]
	13.28	13.62	.12	15.04	16.03	1.82	17.40	18.73	1.25	19.04	[illegible]	.52
	0.60	1.40	.79	1.38	2.60	.65	2.22	2.75	.65	2.75	2.92	[illegible]
	2.64	2.89	.37	4.35	4.71	.83	4.83	4.93	.21	6.13	6.16	[illegible]
	6.22	6.41	.20	10.55	[illegible]	.46	11.63	11.65	.78	13.47	14.34	[illegible]
	15.17	15.82	.68	17.32	[illegible]	.73	18.54	19.51	.51	0.73	2.00	[illegible]
	2.49	2.59	1.00	[illegible]	3.01	.10	4.00	4.71	.59	4.50	4.51	[illegible]
	5.95	5.98	.95	6.29	7.01	.89	7.75	[illegible]	[illegible]	7.98	8.03	[illegible]
	[illegible]	[illegible]	.12	[illegible]	11.85	.45	[illegible]	[illegible]	.72	[illegible]	[illegible]	[illegible]
	[illegible]	16.91	1.50	[illegible]	19.57	[illegible]	[illegible]	[illegible]	[illegible]	2.32	2.41	[illegible]
	3.25	[illegible]	[illegible]	[illegible]	[illegible]	.18	[illegible]	5.71	.47	6.11	7.01	[illegible]
	7.65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.54	[illegible]	12.39	12.49	[illegible]
	12.61	13.39	.42	13.34	[illegible]	[illegible]	[illegible]	[illegible]	.22	15.16	16.38	.85
	16.63	16.70	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18.49	[illegible]	[illegible]
[illegible]	1.91	1.93	.10									

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83.C.D.2-3-23

T3S R99W S12 SENW

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Greasewood

Permanent Transect # 4

Date 6/4/75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
[illegible]	19.60	19.79	2.10	0.57	0.57	.37	1.52	2.45	.98	2.60	3.73	.64
	4.03	4.16	.40	5.45	5.53	.34	6.35	7.47	1.00	7.56	8.11	.43
	8.50	9.06	.35	10.00	10.2[illegible]	.27	10.59	10.79	.42	11.45	12.82	.73
	13.54	15.08	1.25	18.[illegible]	[illegible]	.41						

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AT DATA SHEET C.22.3-24
ACEOUS STRATUM

Project S3
Sheet 1 of 1

Vegetation Type [illegible] Transect # 4 Type P m
[illegible] R [illegible] S 12 1/4 1/4 S [illegible] Quadrat Size 5m² ~~[illegible] in.~~
Aspect (degrees) 93° Slope (percent) 20% Elevation (feet) 6450
Field Analyst(s) [illegible] Date 6/11/75
Site Description [illegible] QA Check

								Quadrat Number				
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		NA										
Percent of Total · Each Species												
Species	Code #	Phenology Code										
1 [illegible]	198	2	15.0	5.0	.5		1.5	T	T		T	T
2 [illegible]	52	2	T	5.0	3.0	3.0	4.0	2.	1.0	T	2.5	1.5
3 [illegible]	53	2	T	T			T	2.	2.0	2.0	1.0	1.5
4 [illegible] pinnata	258 73	3	2.0	.5	.5	T	3.0	T	T		T	T
5 [illegible]	199	2	T	T	T							
Poa pratensis 64.1	[illegible] 5	2		T	T	3.0	T	T				T
7 [illegible] 64.2	286 [illegible]	2					T				T	

27·8 - Shrub

90
48

83 C.2.2.3-25

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Station Type Greasewood

Non-Permanent Transect # 5

T1S R 99W S 16 1/4 1/4 S NE SW

Transect Length 100m

Aspect (degrees) 140°

Slope (degrees) 3°

Elevation (feet) 6800'

Field Analyst(s) Ellis, Baker

Date 17 July '75

Site Description alluvial fan above stream – ~~[illegible]~~ mixed w/ [illegible]

QA Check RDM 7/27

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Sarcobatus vermiculatus	29	-	39	26	33	[illegible]	21	[illegible]
2 Chrysothamnus nauseosus	19	[illegible]	55	77	33	[illegible]	17	normal
3 Artemisia tridentata	14	[illegible]	8	7	7	[illegible]	[illegible]	|
4 Atriplex confertifolia	16	[illegible]	0	1	1	1	2	↓
5								
6								
7								
8								
9								
10								

ett. score com legibility

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
hna [illegible]	0	.48	.62	.38	3.13	3.50	3.32	3.50	4.24	[illegible]
nau[illegible]	8.70	8.37	6.18	6.32	9.19	[illegible]	[illegible]	13.01	[illegible]	16.[illegible]
	[illegible]	18.38	[illegible]	[illegible]	[illegible]	[illegible]	2.0[illegible]	[illegible]	6.88	7.[illegible]
	[illegible]	7.48	8.70	[illegible]	10.90	11.1[illegible]	12.12	12.70	13.2[illegible]	[illegible]
	15.67	15.74	16.06	16.1[illegible]	[illegible]	[illegible]	[illegible]	19.92	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15.[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
Save	2.40	3.00	3.65	4.14	4.78	5.00	5.05	6.00	7.11	7.[illegible]
	[illegible]	[illegible]	11.03	10.15	10.41	[illegible]	[illegible]	.99	12.28	[illegible]
	15.05	11.50	[illegible]	7.70	[illegible]	[illegible]	[illegible]	[illegible]	0	.26
	.34	.52	7.40	3.0[illegible]	[illegible]	[illegible]	[illegible]	17.[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	2.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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83.C.2.2.3-2b

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

1S 99W S16 NESW

Project 83
Sheet 2 of 2

Vegetation Type Greasewood
Non-Permanent Transect # 5
Date 17 July 75

Species	Intercepts (m) I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
rt. tridentata	3.02	3.22	9.10	8.95	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]
	4.97	5.41	[illegible]	8.15	5.2[illegible]	[illegible]	12.[illegible]	[illegible]		
[illegible]atus	0	.70	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
vermiculatus	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	13.[illegible]	15.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	15.[illegible]	[illegible]	11.52	[illegible]	[illegible]	[illegible]		

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99W S8 NWSE

QUADRAT DATA SHEET
HERBACEOUS STRATUM

83.C.22.3-27

Project 83

Sheet 1 of 1

egetation Type GREASEWOOD Transect # 2 (6) Date 22 July 75

Vories/Baker Perm

Percent of Total · Each Species			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Species	Code #	Phenology Code	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
ienopodium fremontii	198	3	33	10	16	6	75	35	60	25	18	8	8	1			22	8	6	2	1	T
ppula redowskii	199	7			3	T							5	1	4	T	3	T				
itanion hystrix	112	7										30		6								
gropyron smithii	052	2														30				6		
Bromus tectorum	067	5																T				
Kochia iranica	265	2																	22	6		
Elymus cinereus	200	5																				4

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83.C.2[illegible].3-28

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Vegetation Type Crested
VOEIOS / DRICK

Transect # 3 (7)
Permanent

Project 83
Sheet 1 of 1
Date 21 July 75

Percent of Total · Each Species

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Species	Code #	Phenology Code	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Kochia iranica	265	2	250	50	250	50	100	[illegible]	45	12	110	35	130	40	20	8	25	10	85	30	6	1
Chenopodium album	268	3	6	2	15	5	31	8	130	10	7	3	80	30	3	1	35	11	11	8	6	2
Agropyron smithii	052	2		1						2								2		T		
Descurainia pinnata	255	2	5	1	2	T	8	3			2	1			22	4	6	2				
Agropyron cristatum	051	2				4		2		4		5		8		[illegible]0		10		10		15
Allot l.pailfolia	156	2									1	T										

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T1S, R99W, S12, SE/NW

83.C.223-29

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Greasewood
Transect # 4 (8)
Date 21 July 75

Yocres / Baker
Permanent

Percent of Total · Each Species

Species	Code #	Phenology Code	Quadrat Number 1 #	%	2 #	%	3 #	%	4 #	%	5 #	%	6 #	%	7 #	%	8 #	%	9 #	%	10 #	%
henopodium album	268	3	87	30	126	30	6	2	5	1	29	8	11	3	7	2			4	2	7	2
[illegible]	052	2		4		30		15		25		10		8		6		2		8		10
henopodium fremontii	198	2	11	6			1	1	1	T					2	1	2	1				
gropyron trachycaulum	054	2												5								
~~estuca idahoensis~~ ~~207~~ Poa sandbergii		2						4						1								

83.C.2.2.4-34

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 3

Sheet 1 of 1

Vegetation Type Mixed Brush Transect # 1 Type Permanent

T 1S R 99W S 32 1/4 1/4 S SE/SW Transect Length 100m

Aspect (degrees) 320 Slope (percent) 15 Elevation (feet) 7250

Field Analyst(s) Ellis / Turner Date 5/30/75

Site Description transition zone, P-J-Sage QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat					Condition
			1	2	3	4	5	
1 PIED	2	2	1	—	—	—	—	normal
2								
3								
4								
5								

Species	Intercepts ~~(cm)~~ M								Trunk Diameter Inches ~~(cm)~~ of Each Tree
	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	
Pied	0.59	2.34							5.25

83.C.2.2.4-35

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Mixed Brush
Permanent Transect # I

S R 99w S 32 1/4 1/4 S SE/SW
Transect Length 100 m

Aspect (degrees) 320
Slope (percent) 15
Elevation (feet) 7250

Field Analyst(s) Ellis / Turner
Date 5/30/75

Site Description transition zone, P-J-Sage
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Amut	32	3	8	6		5	8	Normal
2 Syar	33	2	40	43		32	38	〃
3 Teca	31	2	10	82	134	61	29	〃
4 Ar~~..~~tr	14	2	12	11			3	〃
5 Pied	2	2	4	6		3	3	〃
6 Cemo	17	2		8		5	2	〃
7 Chui	20	2		11	24	16	19	〃
8 Amos	1	2		1			1	↓
9								
10								

Intercepts (cm) M

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Amut	1.10	4.07	3.05	[illegible]	[illegible]	1.20	12.70	[illegible]	1.73	0.00	3.70	1.90
	7.35	9.30	3.30	12.[illegible]	13.30	2.20	3.50	13.35	1.25	14.20	15.[illegible]	1.10
	15.[illegible]	16.37	1.30									
Pied	11.30	12.20	2.50									
Chui	1.94	1.97	.04	1.25	1.34	.03						
Artr	3.35	3.30	.55	[illegible]	5.11	.20	7.50	8.30	.80			
Syar	14.04	14.[illegible]	.20	15.30	15.55	.25	16.[illegible]	17.[illegible]	.45			
	2.15	2.19	.04	6.50	6.72	.12	10.40	[illegible]	.10	15.20	15.[illegible]	.14
	10.51	10.[illegible]	.15	14.[illegible]	15.[illegible]	.37	13.22	13.[illegible]	.42	13.[illegible]	14.05	.10
Teca	16.74	16.80	.06	13.3[illegible]	13.[illegible]	.08	1.43	2.04	.06	5.65	5.[illegible]	.10
	7.66	7.3	.05	3.4[illegible]	3.51	.23	13.13	13.20	.05	16.60	[illegible]	.05
	13.2	13.[illegible]	.15	13.[illegible]	13.32	.15	11.50	11.55	.03	14.[illegible]	15.07	.15
	17.[illegible]	17.[illegible]	.07	1.[illegible]	[illegible]	.05	3.45	4.[illegible]	1.2	6.74	[illegible]	0.3
Cemo	6.10	1.35	.75	11.73	[illegible]	.23	17.05	17.[illegible]	.06	12.[illegible]	13.[illegible]	.55
	13.35	14.31	.55									

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83.C.2.2.4-36

QUADRAT DATA SHEET
HERBACEOUS STRATUM

On tract

Project 83

Sheet 1 of 1

Vegetation Type Mixed brush
Transect # I
Type PERM.
T 15 R 99W S 32 1/4 1/4 S SE/SW
Quadrat Size 1/2 x 1 m
Aspect (degrees) 320
Slope (percent) 15 %
Elevation (feet) 7250
Field Analyst(s) Turner, Ellis
Date 30 May 95
Site Description [illegible] P-J sage
QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover			N/A									→
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Clematis hirsutissima	217	3,4	2								1	
Stipa sp.	114	2	1	3				1		10		T
Hymenopappus [illegible]	155	2	T									
~~[illegible] sp.~~ [illegible] sp.	220	2	T									
Penstemon ~~sp.~~ caespitosus	102	2	T			2				1.5	2	4
Linum lewisii	190	2		T				2		T		
Eriogonum [illegible]	128	2		T								
[illegible] sp.	77	2		T								
Bromus ~~sp.~~ [illegible]	163	2			T							
Lithospermum ruderale	162	2,3,4			1							
Crepis ?	213	2			T							
Agropyron ~~sp.~~ [illegible]	166	2				2		T	T		3	4
[illegible]	175	2				T		T				
Antennaria sp.	58	2				T					T	T
Erigeron sp.	77	2				T						
[illegible]	52	2					1					
Castilleja [illegible]	127	2					1		1			
Koeleria [illegible]	90	2					2	T	4	1	1	2
k [illegible] sp.?	168	2					T					
Taraxacum officinale	203	2					T		T			
Phlox longifolia	156	3										
Delphinium nelsonii	167 K.V. ~~210~~	2										
Senecio canus	218	3							1			
[illegible] ~~[illegible]~~ sericeus	144 K.V. 71	2							1			
Poa ~~[illegible]~~ [illegible]	108	2							1			
Oryzopsis hymenoides	100	2								2		
Solidago sp.	130	2								1		

k Specimen collected

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83.6.2.2.4-37

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Mixed Brush
Permanent Transect # 2
2S R 99W S 18 1/4 1/4 S SE NE
Transect Length 100m
Aspect (degrees) 333°
Slope (percent) 43%
Elevation (feet) 7180
Field Analyst(s) Koehler [illegible]
Date 6/11/75
Site Description [illegible]
QA Check [illegible]

Species	Code #	Phenology Code	1	2	3	4	5	Condition
			# in each 6 x 20 m quadrat					
1 Artr	14	2	32	52	23	26	12	[illegible]
2 SYMP oseo	33	2	43	28	57	76	27	
3 ~~Chi~~		~~2~~	~~5~~	~~12~~	~~9~~	~~14~~	~~8~~	
4 [illegible]	32	2	37	[illegible]	91	81	24	
5 Teca	31	2	2	2				
6								
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Artr	0.56	1.04	34	10.16	[illegible]	43	19.34	20.04	40	5.09	5.51	53
	5.70	6.10	44	12.50	12.[illegible]	[illegible]	8.48	8.75	22	14.20	14.60	39
	18.48	19.82	38	12.20	12.45	27	12.54	13.50	75	5.41	5.51	5
	[illegible].90	9.11	21	7.95	8.[illegible]	49	13.[illegible]	13.90	24			
	2.86	2.93	21	8.05	8.21	19	11.[illegible]	[illegible]	~~7~~	5.50	5.[illegible]	[illegible]
	9.80	9.[illegible]	5	15.[illegible]	15.[illegible]	4	[illegible]	7.55	7	[illegible]	[illegible]	10
	[illegible]	[illegible]	12	2.[illegible]	3.[illegible]	14	[illegible]	[illegible]	~~9~~	16.40	[illegible]	5
	8.00	8.25	10	17.10	17.13	~~6~~	[illegible]	17.[illegible]	~~10~~			
SYMP	2.90	3.28	17	4.76	4.79	6	9.52	[illegible]	18	14.10	[illegible]	6
	14.35	14.58	22	.40	.80	23	2.[illegible]	2.81	21	2.8[illegible]	[illegible]	20
	11.13	11.55	21	4.13	4.28	10	4.70	5.38	29	9.31	8.[illegible]	[illegible]

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83.C.2.2.4-38

25 99W 18 SENE

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 85

Sheet 2 of 2

Vegetation Type Mixed Brush Permanent Transect # 2 Date 6/1/75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Amal	3.70	3.85	11	4.05	4.10	45	1.22	8.05	185	14.5[illegible]	15.[illegible]	354
	.95	1.01	14	1.53	2.12	116	2.60	3.19	37	3.40	3.94	41
	4.52	4.54	5	16.95	17.9[illegible]	150	19.49	22.09	450	8.78	8.95	40
	9.56	9.80	36	10.37	12.[illegible]0	105	13.73	13.76	5	19.80	19.82	4
	15.24	16.39	42	~~[illegible]~~	~~11.9[illegible]~~	~~36~~	17.05	17.42	40	18.01	18.04	5
	19.60	19.68	10	0.00	0.12	13	2.74	2.76	57	4.27	4.40	12
	4.55	5.76	175	6.[illegible]	7.52	36	11.20	12.23	140	3.21	7.20	900
	10.30	13.10	650									
?	9.00	9.02	13	10.00	10.17	23	13.71	13.[illegible]1	5	16.42	16.9[illegible]	[illegible]
	17.46	17.78	30	18.22	18.35	9	1[illegible].9[illegible]	19.52	100	1.13	1.37	19
	2.93	3.00	12	4.00	5.42	[illegible]	5.90	[illegible].10	25	7.82	11.43	90
	13.50	13.54	170	11.60	16.80		11.[illegible]	16.95		17.05	17.35	
							one	plant	[illegible]	[illegible]	[illegible] =	9[illegible]
	17.75	18.50	175	18.55	20.45	[illegible]	2.10	7.50	800	9.10	12.60	400

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85.C.2.2.4-54

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QUADRAT DATA SHEET

HERBACEOUS STRATUM

Project ∇^2

Sheet 1 of 1

Vegetation Type Mixed Brush Transect # 2 Date 6/11/75

Quadrat Number

Percent of Total · Each Species			1	2	3	4	5	6	7	8	9	10
			NA	—	—				—	—	—	—
Species	Code #	Phenology Code										
PENT sp	102	2	.5									
ERIG eron sp	77	2	T		T	T		T	T		T	
COLL insia [illegible]	219	3	T									
AGRO [illegible] sp.	166	2	1.			T			T			
Frasera sp. ~~Gentian?~~	224	2	1.		T							
[illegible] sp	78	2	1.									
Orhi	100	2	0.5	.5	4.	3.	T	1.				
CRY ~~sp~~ [illegible]	71			5.								
Frasera [illegible]	225	2		T	T				3.			
LUPI sp	94	2		T		2.		1.				
Kocr.	90	2	T	T		T	T	T				
Poa [illegible]	175	2				.5	T	T	T	T		
TRIF [illegible]	~~[illegible]~~ 73	2			T							
CREP. crepis	213	2			.5							
Poa secunda ~~[illegible]~~	207	2					T	T	3.			
Phlo Phlox longifolia	156								T			

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LINE-STRIP METHOD 83, C.2.2.4 -40
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2 3

Vegetation Type Mixed Brush [illegible]

Permanent Transect # 3

T 2S R 100 W S 24 1/4 1/4 S SESE

Transect Length 100 m

Aspect (degrees) 90° - 1st 60 m 130° - last 40 m

Slope (percent) 40% on 1st 3 quadrats

Elevation (feet) 7840

Field Analyst(s) [illegible]

Date 5/31/75

Site Description

QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 [illegible]	25	2	4	3				shabby
2 A[illegible] vt	32	2 & 3	54	57	48	54	19	normal
3 Sym oreo	33	2	31	28	7	19	16	normal
4 Prvi	23	2	2					
5 Putr	24	2	24	16	41	34	17	
6 Ar[illegible]tr	14	2	17	173	79	17	5	
7 Cemo	17	2				3		
8 Chvi	20	2			8	5	11	
9								
10								

Intercepts ~~(cm)~~ m

Species	I_1	I_2	Dia cm	I_1	I_2	Dia cm	I_1	I_2	Dia cm	I_1	I_2	Dia cm
Am[illegible]	0.23	0.40	20	0.92	1.25	2500	2.20	2.50	32	2.50	[illegible]	40
	2.91	3.10	31	3.10	3.55	47	9.05	9.21	23	13.60	[illegible]	[illegible]
	14.23	[illegible]	21	15.50	15.[illegible]	5	6.05	17.10	39	0.14	0.85	81
	2.40	[illegible]	85	3.03	3.14	45	4.20	4.45	41	5.30	5.10	[illegible]
	6.51	[illegible]	115	[illegible]	[illegible]	21	[illegible]	[illegible]	29	[illegible]	10.37	6
	11.02	[illegible]	14	11.98	12.27	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	5.00	[illegible]	[illegible]	[illegible]	15.[illegible]	50 / [illegible]	17.15	[illegible]	85	19.00	[illegible]	[illegible]
	[illegible]	8.26	47	10.09	10.25	25	14.[illegible]	[illegible]	315	11.51	12.4[illegible]	[illegible]
	19.42	20.[illegible]	150 / 300									
Putr	5.60	5.63	12	5.90	[illegible]	41	7.90	9.05	37	17.19	[illegible]	81
	[illegible]	19.98	64	10.93	11.02	24	17.16	[illegible]	78	7.92	[illegible]	20
	16.79	17.[illegible]	25	3.[illegible]	5.95	175	9.42	11.01	175	13.40	[illegible]	[illegible]
	14.8[illegible]	15.8[illegible]	85									
[illegible]tr	1.50	1.71	41	[illegible]	[illegible]	21	11.30	[illegible]	27	15.[illegible]	[illegible]	31
	[illegible]	[illegible]	37	3.80	4.34	45	8.69	[illegible]	24	10.3[illegible]	[illegible]	4
	[illegible]	11.31	10	12.70	[illegible]	34	17.14	[illegible]	60			

~~height~~ * ht. / wdth. Ave. used

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83.C.2.2.4-411

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

25 100W S24
SESE

Vegetation Type Mixed Brush Permanent Transect # 3 Date 5/31/75

* $\frac{\text{height}}{\text{width}}$ Ave. used

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
SYMP	6.80	6.90	12	12.20	12.63	34	6.06	6.31	23	18.23	18.85	75
	19.45	21.50	150	0.45	1.00	37	11.76	11.86	7	16.75	16.91	4
	19.15	19.25	10	0.20	2.90	$\frac{50}{325}$	8.33	8.57	7	11.85	12.10	19
	17.11	17.82	35									
Quga	2.30	8.80	$\frac{275}{300}$ *	1.30	7.80	$\frac{200}{225}$	17.07	21.60	$\frac{50}{175}$	7.72	3.40	$\frac{60}{[illegible]}$
Chvi	10.50	10.45	7									
Cemo	6.15	8.90	$\frac{125}{300}$									

83.C.2.2.4-42

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Transect # 3 Type Perm.
etation Type Mixed Brush Quadrat Size ~~100m~~ .5m²
?S R 100W S 24 1/4 1/4 S SE SE Elevation (feet) 9840
ect (degrees) 90-158 130-45 Slope (percent) 40% Date 5/31/75
ld Analyst(s) Ellis, Kochler, Kessel QA Check [illegible]
e Description

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
tal Percent Cover		NA										
ercent of Total · Each Species												
pecies	Code #	Phenology Code										
Carex geyeri	160	2	2	1	5	4						
Gilia sp.	85	2	1							T		
ryzopsis [illegible]	100	2	1						1		5	[illegible]
llinsia sp. parviflora K.V.	219	3,4	T	T		T			T			.5
Delphinium nelsoni	167	2,3		T		~~T~~	T		T			
[illegible]hiza ?	221	3,4		2		~~2~~	2					
Unk 1 [illegible]?	222	2				~~2~~	3					
Eriogonum [illegible]	128	2			[illegible]	3						
Agropyron ~~sp.~~ trachycaulum	166	2				[illegible]		2		3		
Unkn R (asclepias like)	223	2,3				[illegible]		T				1
Antennaria	58	2				~~T~~		T				
Penstemon ~~sp.~~ caespitosus	102	2						2				T
Physaria floribunda	175	4							1		T	T
Phlox longifolia	156	3,4										
Astragalus ?	62	2,3,4										T
Aster sp.	61	2										1

ECI

83.C.2.2.4-42

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Transect # 3 Type Perm.

etation Type Mixed Brush
Quadrat Size ~~100m~~, 5m²
25 R 100W S 24 1/4 1/4 SSE SE
Elevation (feet) 9840
ect (degrees) 90-135 130-135 Slope (percent) 40%
Date 5/31/85
ld Analyst(s) Ellis, Kochler, Kessel
QA Check J. Ahs
e Description

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
							✓					
otal Percent Cover		M										
ercent of Total · Each Species												
pecies	Code #	Phenology Code										
Carex geyeri	160	2	2	1	5	4				T		
Gilia sp.	85	2	1						1		5	1
ryzopsis hym.	100	2	1						T			.5
llinsia ~~sp.~~ parviflora K.V.	219	3,4	T	T		T			T			
delphinium nelsoni	167	2,3		T		T	T					
hiza ?	221	3,4		2		2	2					
Unk 1	222	2				2	3					
Eriogonum umb.	128	2			B	3						
Agropyron ~~sp.~~ trachycaulum	166	2				[illegible]		2		3		
known 2 (asclepias like)	223	2,3				T		T				1
Antennaria	58	3				T		T				
enstemon ~~sp.~~ caespitosus	102	2						2				T
Physaria floribunda	175	4							1		T	T
Phlox longifolia	156	3,4										
Astragalus ?	62	2,3,4										T
ster sp.	61	2										1

LINE-STRIP METHOD 83.C.2.2.4-13
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Mixed Brush Don Permanent Transect # 4

2S R 100W S 10 1/4 1/4 S SE SE Transect Length 100 m.

Aspect (degrees) 310° Slope (percent) 39% Elevation (feet) 8200'

Field Analyst(s) [illegible] Date 6/1/75

Site Description [illegible] NW facing slope QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artemisia tridentata	14	2	106	83	54	63	[illegible]	
2 Amelanchier utahensis	32	3	12	23	27	14	[illegible]	
3 Symphoricarpos oreophilus	33	1	35	12	25	29	24	
4 Purshia tridentata	24	2	3	10	1	1		[illegible]
5 Chrysothamnus viscidiflorus	20	2					3	
6								
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Artemisia tridentata	.95	1.0	N/A	5.34	6.11	N/A	6.72	6.83	N/A	6.90	7.29	N/A
	7.90	8.12		8.15	8.39		8.69	8.71		12.30	12.70	
	12.53	13.57		13.90	14.49		15.15	15.60		16.58	17.05	
	17.25	17.45		17.60	17.90		18.15	18.50		18.97	19.62	
	18.22	18.29		.59	1.28		2.35	2.50		2.90	2.95	
	3.20	3.37		3.93	4.60		13.72	13.79		17.68	18.43	
	2.22	2.73		9.38	10.87		11.02	11.53		14.10	14.75	
Amelanchier utahensis	1.32	1.79		2.50	3.63		9.45	11.05		19.25	19.35	
	1.33	1.46		5.98	9.14		9.95	12.80		14.85	15.63	
	19.0	19.25		19.50	20		0	1.90		3.15	4.42	
	4.61	6.71		6.20	7.30		8.10	10.10		12.41	13.35	
Symphoricarpos oreophilus	.92	.98		3.19	3.67		3.76	4.48		4.75	4.95	
	9.39	9.75		10.10	10.21		10.53	10.95		11.48	11.55	
	15.02	15.33		18.12	18.21		1.58	2.13		15.62	15.73	
Purshia tridentata	7.36	7.51		1.43	1.47		14.95	15.09		1.7	1.79	

2S 100W S10 SESE

83, C, 2.2, 4-44

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Mixed Brush

Non-Permanent Transect # 4

Date 1 June 75

Intercepts (cm)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
[illegible]	16.70	17.45	17.63	18.05	19.12	19.27	6.20	6.45	9.12	9.62
	10.38	10.59	12.98	13.30	15.38	15.54	19.10	20	0.50	0.53
	1.54	1.94	2.21	2.50	3.79	3.89	4.24	4.41	4.93	4.96
	7.0	8.27	8.78	9.12	9.43	9.51	10.16	10.44	11.40	11.59
	11.92	12.37	12.53	12.61	13.14	13.29	19.97	20.00		
[illegible]	15.76	16.25	1.60	3.52	4.22	5.62	7.23	8.65	16.80	18.0
	18.00	18.35	13.24	13.42	13.92	15.92				
[illegible]	15.98	16.13	19.24	19.35	.70	.73	7.51	7.91	8.10	8.57
	12.13	12.46	13.5	13.97	1.68	2.22	5.55	5.73	9.93	9.11
	16.35	16.55	3.06	3.44	3.07	3.10	3.68	3.97	11.63	11.72
	15.71	14.12	11.41	16.54	16.94	17.13				
[illegible]										

83.C.2.2.4-45

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Mixed Brush Transect # 5 Type NON-perm

T 2S R 99W S 6 1/4 1/4 S SW/NE Transect Length 100 m.

Aspect (degrees) 38° Slope (percent) 18° (31%) Elevation (feet) 7200 ft.

Field Analyst(s) Turner / Pick Date 5-31-75

Site Description upper ⅓ slope / [illegible] gully FAIRLY MOIST ASPECT CHANGE QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2		1				[illegible]
2								
3								
4								
5								

Species	Intercepts (cm) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter inches ~~(cm)~~ of Each Tree
Pied									5.34

ECI

83.C.2.2.4-46

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM 46481 Project 83

Sheet 1 of 2

Vegetation Type Mixed Brush Non-Permanent Transect # 5

T 2S R 99W S 6 1/4 1/4 S SW/NE Transect Length 100m

Aspect (degrees) 38° Slope (percent) 18° Elevation (feet) 7200

Field Analyst(s) Turner / Pido Date 5/31/75

Site Description [illegible] site upper 1/3 slope slight change aspect & slope - veg. change (+-) QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Arut	32	2, 3	36	27	24	6	17	normal
2 Suor	33	2	43	25	7	2	27	↓
3 Cerbo	17	2	13	12	26	0	0	
4 Artr	14	2	5	4	0	2	7	
5 Chvi	20	2	7	6	0	0	5	
6 Pied	2	2	0	2	1	0	0	
7 Chna	19	2	0	0	1	19	2	
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Arut.	4.13	4.64	8.90	8.99	9.05	9.60	9.70	10.44	11.86	12.20
	12.22	12.55	13.44	15.45	15.71	16.75	17.05	17.44	17.90	[illegible]
	19.12	19.28	4.30	5.35	5.65	5.81	6.06	6.55	6.67	7.23
	8.60	9.00	10.42	11.10	12.60	12.85	4.55	5.24	4.30	4.72
	9.09	11.00	11.64	11.92	12.55	14.00	14.10	14.69	14.75	15.95
	17.00	17.59	17.55	17.81	19.33	19.61	19.70	20.00		

DIA 5.34"

ECI

83.C.2.2.4-47

2S 99W 6
SWNE

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 3

Vegetation Type Mixed Brush
Non-Permanent Transect # 5
Date 5-31-75

Species	Intercepts (cm) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Syor	1.66	1.99	4.05	4.17	9.85	10.00	10.05	10.32	16.95	17.00
1 .	18.11	18.22	15.00	10.15	10.21	10.26	3.66	4.88	9.71	9.82
	10.42	10.69	[illegible]	12.09	19.45	19.53				
Caro	13.10	13.40	11.10	12.10	12.86	13.50	14.60	14.05	15.10	16.19
	16.92	17.14	18.75	19.32	1.32	1.81	5.40	5.99	7.25	7.85
	10.72	11.48								
Chvi	16.70	16.77	5.83	6.25						
Artridentata	4.55	4.76	5.10	5.51	7.40	7.76	10.30	10.42		
China	8.60	8.80	9.80	9.96	13.80	14.70	17.94	18.04		

83.6.2.0.4-48

LINE-STRIP DATA SHEET

~~NATURE TREE STRATUM~~

SHRUB, TREE SEEDLING STRATUM

Br

Project 83

Sheet 1 of 2

Vegetation Type Mixed Brush

Transect # 6

Type non-Perm

T 15 R 100W S 36 1/4 1/4 S SW/SE

Transect Length 100 M.

Aspect (degrees) 345

Slope (percent) 7%

Elevation (feet) 7680

Field Analyst(s) Pich / Ellis

Date 6-2-75

Site Description Sparse to med. dense Amelanchier & Artemisia *

QA Check [illegible]

1.5 - .5 meter ht. shrubs

			# in each 6 x 20 m quadrat					
Species	Code #	Phenology Code	1	2	3	4	5	Condition
1 Artem. tr.	14	2	80	65	62	71	85	galls
2 Amelanchier utah	32	2, 3	14	17	33	33	22	Norm.
3 Chrysotham. visid.	20	2	27	21	0	0	19	heavily [illegible]
4 Symphoricarpos oreophilus	33	2	24	45	44	43	20	Norm.
5 Purshia tridentata Kv.	24	2	4	4	1	0	4	Hvy Browsed
Tetradymia canescens	31	2	1	0	0	0	0	med. [illegible]

	Intercepts (cm)								
Species	I_1	I_2	I_1	I_2	I_1 M	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
Artem. nova	1.40	1.44	3.12	3.50	6.20	6.26	8.58	9.59	/
	14.60	15.12	15.58	15.88	17.70	17.94	3.60	3.73	
	4.40	4.63	11.31	12.30	15.71	15.78	16.55	17.78	
	8.18	8.28	9.20	10.10	10.95	11.01	18.25	18.95	
	2.36	2.50	6.30	7.00	8.24	8.94	11.09	11.52	
	15.55	16.17	16.92	16.97	19.40	19.52	19.89	20.28	
	2.61	3.11	4.65	4.73	6.70	6.80	7.66	8.00	
	9.63	10.36	10.52	11.02	11.85	12.01	12.30	12.92	
	15.01	15.10	16.58	15.04	17.47	17.63	18.34	18.98	
Chrysotham. visid.	2.40	2.49	4.0	4.24	4.90	4.90	6.69	6.88	
	7.10	7.22	8.70	8.79	8.80	9.11	10.05	10.17	
[illegible] TRID.	2.80	2.83	7.68	8.12	13.08	13.84	3.76	3.80	
	19.19	12.54							

* more young sage toward east quadrats

[illegible] larger [illegible] to point further south

15 100W S36 SWSE

83.C.2.2.4-49

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

Br
Vegetation Type Mixed Brush
Non-Permanent Transect # 6
Date 6-2-75

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
					Intercepts (cm)					
Amelanchier	9.57	11.24	13.10	13.27	16.36	16.63	18.70	19.93	1.92	2.46
UTAH.	5.16	5.39	14.40	15.51	17.70	22.44	1.20	1.85	1.96	4.02
	4.72	5.25	5.85	6.41	6.60	7.95	8.25	8.70	12.69	13.72
	14.09	15.40	11.00	17.36	1.31	1.49	1.93	2.34	2.89	4.13
	5.16	5.79	6.96	8.04	9.39	10.40	13.38	13.77	0.41	0.92
	1.84	2.24	12.88	14.40						
Symphoricarpos	11.30	12.40	13.50	14.65	16.75	17.00	0.90	0.95	2.52	2.79
oreophilus	4.19	4.34	4.70	4.96	5.75	5.91	7.71	8.00	10.20	10.47
	11.80	13.00	13.50	13.80	0.90	1.50	5.30	5.60	7.20	7.61
	8.98	9.15	17.50	18.10	19.56	19.95	19.60	20.01	0.33	.040
	2.71	2.79	4.39	4.52	9.32	9.60	10.40	10.87	13.79	14.34
	17.47	17.53	19.05	19.19	1.51	1.69				
Tetradymia	18.3	18.22								
canescens										

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83. C.2.2.4-50

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Mixed Brush
Permanent Transect # 7
T 25 R 100W S 2 1/4 1/4 S center NE/NW Transect Length 100'
Aspect (degrees) 110°
Slope (degrees percent) 23° 39%
Elevation (feet) 7980'
Field Analyst(s) Pick / Ellis
Date 6-2-75
Site Description Amelanchier w/ few pinyon pine Q. gambelii
1.5 M. [illegible]
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Prunus virginiana	23	2, 3	8	26	–	–	–	nat.
2 Symphoricarpos oreoph.	33	2	54	19	16	46	43	[illegible]
3 Amelanchier utahensis	32	2 3	22	33	45	48	24	[illegible]
4 Quercus gambelii	25	1	10	31	12	3	–	natural
5 ~~[illegible]~~	~~44~~	~~1~~	~~31~~	~~2~~	~~[illegible]~~	~~[illegible]~~	~~–~~	
6 " tridentata	14	2	31	3	3	29	49	
7 Purshia tridentata	24	2	8	1	–	–	1	
8 ~~[illegible]~~	~~40~~	~~2, 3~~	~~–~~	~~–~~	~~2~~	~~–~~	~~–~~	
9 Rosa woodsii	041 24	2			2	–	–	
10 Chrysoth. viscid.	20	2				7	7	

Intercepts (cm) M

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Amelanchier	1.25	1.49	.35	1.80	2.66	1.25	3.11	385	1.25	4.13	4.60	.25
	5.20	6.61	1.3	8.40	10.60	2.5	10.80	1175	.75	13.0	13.5	.15
	13.21	13.59	.33	15.55	17.75	3.1	18.02	20.00	2.5	0.5	1.10	3.0
	3.55	4.10	.50	5.21	7.30	2.0	8.41	8.90	.33	9.69	10.51	.50
	11.20	11.52	2.5	13.50	15.4	[illegible]	16.15	16.95	2.0	17.05	[illegible]	6.5
	2.04	3.67	12.25	5.1	6.58	2.5	[illegible]	[illegible]	1.5	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.25	18.60	[illegible]	1.0	[illegible]	[illegible]	.5
	[illegible]	[illegible]	1.5	3.50	5.80	4.75	6.65	8.10	4.25	8.45	10.3	6.0
	9.22	13.94	9.5	15.00	15.35	1.5	16.30	20.00	5.5	3.30	3.60	[illegible]
	4.40	4.87	.33	7.50	12.60	21.00	14.70	20.00	27.0			
Symphoricarpos oreoph.	1.55	1.62	.15	7.55	7.95	.05	10.65	12.3	.25	1665	17.79	.11
	2.30	2.52	.20	5.62	5.76	.10	10.18	10.35	.35	[illegible]	[illegible]	.5
	[illegible]	[illegible]	.25	[illegible]	[illegible]	.15	1.85	2.35	.5	16.50	17.70	.75
	18.60	18.90	.25	5.20	5.65	.25	6.60	7.25	1.5	15.15	15.55	.75

* Galls on serviceberry

2S 100W S2
NENW

LINE-STRIP DATA SHEET 83.C.2.2.4 -51
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Mixed Brush Permanent Transect # 7 Date 6-2-75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Q. gambeli	1.60	2.80	1.3	3.95	4.55	.5	0.60	2.34	3.6	2.80	3.59	2.3
	5.30	7.00	6.5	7.55	9.1	7.15	9.2	9.89	5.5	12.20	12.59	2.2
	15.7	16.2	1.0	16.35	16.91	2.5	7.60	8.75	5.0	7.75	9.65	3.5
	9.5	11.75	15.5	15.00	15.60	3.0	1.10	1.75	3.5			
Pr. virginia	2.70	3.14	.5	4.39	4.60	.25	7.25	7.51	.05	8.75	9.81	.25
	13.20	13.29	.10	16.0	16.12	.15						
Purshia tridentata												
	7.40	7.62	.10									
Artemisia tridentata												
	14.00	14.90	.45	14.75	15.25	.33	11.50	12.50	3.0	2.40	3.85	.5
	3.30	3.45	.10	4.20	4.50	.30	4.82	5.43	1.0	6.20	6.48	.20
	12.88	13.75	.75									

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1
2
3

83.R.2.2.4-52

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Mixed Brush Transect # 7 Type PERM

T 2 S R 100 W S 2 1/4 1/4 S NE/NW Quadrat Size .5 m²

Aspect (degrees) 110° Slope (percent) 23° Elevation (feet) 7980'

Field Analyst(s) PICK, ELLIS Date 2 June 75

Site Description Dense, diverse coll. [illegible] stand, [illegible] QA Check [illegible]

on more S. [illegible] aspect. (1.5 meter high)

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species		NA										
Species	Code #	Phenology Code										
Carex geyeri	160	3, 4, 2,	30	10	8	6	5	8	3	5	10	T
Eriogonum umbellatum	128	2	1									
Delphinium nelsonii	167	2	T									
Collinsia parviflora	219	4	T									
Agropyron smithii	52	2	T									
Poa sp.	125	2	T									
Galium boreale	83	2				T						
Achillea lanulosa	50	2							2			
Melica spectabilis	161	3										
Solidago sp.	130	2									T	

Also — Pachystima myrsinites

LINE-STRIP DATA SHEET 83.C.2.2.4-53

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Mixed Brush

Non-Permanent Transect # 8

T 25 R 100W S 15 1/4 1/4 S SENW

Transect Length 100 m

Aspect (degrees) 123°

Slope (percent) 40%

Elevation (feet) 8400

Field Analyst(s) Koehler, Pick, Koehl[illegible].

Date 6/5/75

Site Description [illegible]

QA Check [illegible]

Species	Code #	Phenology Code	1	2	3	4	5	Condition
			# in each 6 x 20 m quadrat					
1 A[illegible] utahensis	32	3	65	55	48	26	30	good
2 S[illegible] oreo	33	2	32	49	72	37	37	normal
3 Purshia tridentata	14	2	165	62	[illegible]	94	97	good
4 P[illegible]	23	2	[illegible]	[illegible]	5	13	18	normal
5 Quercus gambelii	25	1		2			7	poor
6 Chrysothamnus viscidiflorus	20	2					2	normal
7								
8								
9								

Intercepts (cm) [illegible]

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
A. [illegible]	0.05	0.37	0.41	0.52	0.97	1.25	2.60	2.89	3.21	3.71
	4.05	4.09	11.36	11.58	12.49	12.[illegible]	12.41	12.93	13.56	13.82
	14.72	15.15	15.61	15.72	15.94	16.21	16.40	17.23	17.47	17.83
	18.08	18.56	18.91	19.12	0.30	0.65	0.90	1.32	1.14	2.53
	2.43	2.90	3.18	3.24	3.51	3.60	4.54	4.93	6.33	7.19
	11.45	11.62	11.70	12.41	12.42	12.54	15.90	15.20	9.17	[illegible]
S[illegible]	1.40	1.79	10.14	10.21	13.21	13.45	0.23	1.03	4.21	5.16
oreo[illegible]	1.78	2.00	1.70	2.05	5.76	6.37	6.55	6.77	4.97	[illegible]
	10.78	11.01	14.31	14.62	17.50	18.00	11.03	12.[illegible]	14.50	15.[illegible]
	9.18	9.53	12.67	12.74	13.95	14.07	15.30	16.50	11.60	11.[illegible]
Q. gambelii	5.20	10.33	13.70	15.60	8.20	9.26	10.14	12.89	15.25	16.33
	17.94	18.39								
Chrys.	10.58	11.12	11.02	11.19						

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LINE STRIP DATA SHEET 83.C.2.2.4-54
SHRUB, TREE SEEDLING STRATUM
T2SR100W S15 SENW

Project 83
Sheet 2 of 2

Vegetation Type Mixed Brush
Non-Permanent Transect # 8
Date 6/5/75

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
	Intercepts (cm)									
[illegible]	13.70	13.98	19.69	20.15	0.56	3.41	3.90	5.52	6.34	[illegible]
	7.30	8.54	9.05	10.40	10.40	11.60	12.65	14.42	15.80	[illegible]
	3.43	8.74	9.97	10.61	11.07	11.28	13.50	14.52	16.48	16.72
	17.16	17.25	17.11	17.62	19.52	19.70	0.40	11.45	17.20	20.90
	1.24	3.20	3.70	5.66	15.69	19.42				
[illegible]	19.46	19.60	19.80	19.87	14.98	14.99	1.40	1.46	1.83	[illegible]
	6.63	7.50	10.06	10.37	11.61	11.70	13.60	14.73	18.40	[illegible]
	18.88	20.00								
[illegible]	5.00	5.75	10.42	10.47	11.38	[illegible]	13.70	13.90	15.95	16.08
[illegible]	11.93	17.50	17.77	18.20	19.65	20.00				

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LINE-STRIP DATA SHEET 83.C.2.2.4-55

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type MIXED BRUSH Permanent Transect # 9

T 15 R 97W S 31 1/4 1/4 S NW NW Transect Length 100 m.

Aspect (degrees) 160° Slope (percent) 13°

Elevation (feet) 7640

Field Analyst(s) Vories/Ellis

Date 5 Jun 75

Site Description Burned P.J. stand. Large shrubs. Few seedl [illegible]

QA Check [illegible]

600: 5 of [illegible] upper [illegible]

	Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1	Amelanchier utahensis	32	3, 4	27	15		6	10	light browse
2	Cercocarpus montanus	17	2	1	43	33	37	30	Normal
3	Purshia tridentata	74	2	1			5		heavy browse
4	Chrysothamnus viscidiflorus	20	2	3			1		browsed
5	Symphoricarpos oreoph.	33	2	18	4	2		3	normal
6	Ceanothus martini	039	2, 3	27					extremely [illegible]
7	Pinus edulis	2	2	–	2		1	1	Normal
8	Tetradymia canescens	31	2			5	3		heavy browse
9									
10									

Intercepts (m)

Species	I_1	I_2	D/A	I_1	I_2	D/A	I_1	I_2	D/A	I_2
Amelanchier ut.	.30	1.20	.4	1.35	3.28	2.0	4.15	4.80	.5	
	12.15	12.75	.1	13.15	15.7	2.5	17.20	19.50	1.25	
	0.0	.95	1.0	6.20	7.10	.75				
Putr	15.10	15.40	.3	15.6	15.9	.2				
Symp. oreo.	3.30	3.5	.1	3.75	4.65	.5	19.3	19.8	.2	
	9.3	9.65	.2							
Cerco. montanus	1.10	1.35	.5	2.30	3.2	.25	6.5	6.75	.5	
	9.1	9.30	.2	9.5	10.4	1.5	10.3	11.5	1.8	
	13.9	14.05	.3	14.0	14.25	.25	3.8	5.30	1.5	
	10.6	11.75	1.0	13.2	13.40	.5	15.30	15.4	1.1	
	11.51	11.55	.35	17.25	17.70	.4	18.55	19.2	.7	

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LINE-STRIP DATA SHEET 83.C.2.2.9-56
SHRUB, TREE SEEDLING STRATUM

Project 82

1S 99W S31 NW NW

Sheet 2 of 3

Vegetation Type M Brush

Permanent Transect # 9

Date 5 Jan 75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Cercocarpus	4.10	6.20	3.0	5.30	7.6	2.0	2.70	9.60	1.0	10.30	11.10	1.3
montanus												

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QUADRAT DATA SHEET 83.C.2.2.4-57
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type MIXED BRUSH Transect # 9 Type PBrM

T 4S R 99W S 31 1/4 1/4 S NW Quadrat Size .5m²

Aspect (degrees) 160 Slope (percent) 12° 31% Elevation (feet) 7640'

Field Analyst(s) Ellis/[illegible] Date 5 June 75

Site Description Burned PJ [illegible] QA Check [illegible]

[illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species												
Species	Code #	Phenology Code										
[illegible] lewisii	190	3	2	1								
[illegible]	155	2	1	1	1	1	2	3	1	1	5	
[illegible]	100	2	1	T		1						
Cirsium arvense K.V.	227	2	T									
[illegible]	194	2	T									
[illegible]	161	3			3	1		2		1	1	
[illegible]	63	1			T	5						
[illegible]	160	2			1							
[illegible]	199					T						
[illegible] caespitosus K.V.	103 ~~102~~							T				

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83.C.2.2.4-58

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Mixed Brush

Non-Permanent Transect # 10

T 1S R 99W S 20 1/4 1/4 S SW NW

Transect Length 100 meters

Aspect (degrees) 360 Slope (degrees) 20 °

Elevation (feet) 7360

Field Analyst(s) [illegible]

Date 17 July 1975

Site Description Steep slope - shrubs small snow accumulation area

QA Check RBM 7/23

spell out fully from here

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
lanchier utahensis 1 [illegible] utahensis	32	5	61	52	49	22	66	normal
phoricarpos oreophilus 2 [illegible], oreophilus	33	4	53	46	42	16	54	
3 Artemisia tridentata	14	3	3	2	8	4	10	
hrysothamnus 4 [illegible] viscidiflorus	20	3	[illegible]	[illegible]	5	6	4	
5 [illegible] inerme	44	5				1		
rysothamnus nauseosus 6 [illegible]	19	3				1	1	
7								
8								
9								
10								

4-letter abbreviation from here?

Intercepts (m)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
[illegible]	.30	.85	[illegible]	[illegible]	5.10	7.93	9.02	9.15	9.78	12.00
utahensis	[illegible]	[illegible]	13.42	13.72	14.0	14.04	[illegible]	14.91	14.95	15.22
	15.40	15.87	[illegible]	16.20	18.10	18.21	18.32	18.95	[illegible]	[illegible]
	[illegible]	[illegible]	0.55	[illegible]	1.42	1.56	1.62	1.82	1.97	[illegible]
	2.03	3.20	3.50	4.00	[illegible]	8.40	[illegible]	[illegible]	9.46	10.01
	10.12	10.35	10.45	[illegible]	11.03	[illegible]	12.05	12.11	12.59	12.62
	12.73	[illegible]	13.75	[illegible]	[illegible]	[illegible]	[illegible]	14.75	15.35	15.5
	[illegible]	16.09	16.45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	0	.20	5.40	5.53	7.95	8.08	[illegible]	10.10	10.87	[illegible]
	13.43	14.38	14.52	[illegible]	[illegible]	[illegible]	[illegible]	17.45	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.10	0.38	[illegible]	[illegible]
	1.35	[illegible]	1.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10.10	10.21	10.42	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15.10	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.45	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

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T13, R99W, S30, SW/NW

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

83.C.2.2.4-83

Project 83

Sheet 2 of 2

Vegetation Type Mixed Brush

Non-Permanent Transect # 10

Date 17 July 75

ROM 7/23

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
[illegible]	0.40	0.45	0.55	0.91	1.10	1.75	2.38	3.40	5.50	5.10
Utahensis	6.12	5.08	6.10	7.10	7.42	7.58	8.25	8.55	10.51	10.82
	11.31	11.72	12.10	12.53	~~[illegible]~~	~~[illegible]~~	~~12.58~~	12.33	14.35	14.[illegible]
	18.06	18.08	18.92	19.30	3.28	3.50	13.30	13.50	13.00	13.12
	16.51	17.13	19.10	19.80	0.70	0.97	1.00	1.58	2.12	3.[illegible]
	4.33	4.21	4.52	5.03	5.45	5.72	5.80	[illegible]	9.32	9.[illegible]
	10.42	10.06	10.68	11.02	12.00	13.03	~~13.47~~	~~14.82~~	15.23	15.83
	16.29	16.71	17.12	17.20	18.09	18.35	19.00	19.30	)	
[illegible]	0	0.40	0.50	0.72	2.36	[illegible]	5.50	[illegible]	6.31	6.[illegible]
oreophilus	8.00	8.[illegible]	11.[illegible]	11.93	12.43	[illegible]	12.47	13.22	14.[illegible]	[illegible]
	15.[illegible]	15.60	12.91	17.00	[illegible]	[illegible]	1.25	1.35	1.50	1.[illegible]
	13.49	13.52	16.[illegible]	16.[illegible]	0.82	0.95	1.40	1.50	1.68	2.02
	2.20	2.32	[illegible]	2.80	2.96	4.50	5.09	5.71	5.82	6.05
	6.11	6.62	11.21	11.39	11.99	12.82	12.47	13.11	13.31	14.[illegible]
	14.97	15.35	16.01	17.21	16.59	17.50	18.50	18.71	9.10	9.[illegible]
Chry viscidiflorus	4.19	4.28	12.25	12.50						

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LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

83.C.2.2.4-60

Project 83

Sheet 1 of 2

V[illegible]etation Type Mixed MT shrub
Non-Permanent Transect # 11

T 2S R. 100W S 26 1/4 1/4 S SE NW
Transect Length 100 m

Aspect (degrees) 010 Slope (degrees) 11°
Elevation (feet) 8200'

Field Analyst(s) Vories + Harding
Date 18 July 1975

Site Description mesic tall mixed shrub / Artr dying out at ecotone of upper elevational extension of Potr
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artemisia tridentata	14	3	41	13	25	51	34	normal
2 Ar[illegible]	32	5	10	28	28	42	59	↓
3 Symphoricarpos oreophilus	33	4	126	173	127	163	181	
4 Chrysothamnus viscidiflorus	20	2	0	4	0	0	0	
5 Populus tremuloides	3	2	0	0	0	2	2	
6 Rosa woodsii	41	4	0	0	0	0	1	
7 Am alnifolia	34	5	0	0	0	0	11	
8 Ribes inermie	44	5,6	0	0	0	0	3	
9 Prunus virginiana	23	5	0	0	0	0	3	
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Sasy	0.27	0.35	4.12	4.14	4.27	4.40	4.49	4.61	9.08	9.33
	10.82	11.63	11.60	12.11	12.18	14.10	17.50	20.00	0.00	0.15
	0.29	0.37	0.46	1.84	2.03	2.80	2.82	3.10	6.90	[illegible]
	7.30	8.04	8.67	9.15	10.50	10.55	11.10	11.30	11.70	11.80
	12.55	12.60	13.20	13.23	13.40	13.45	15.46	15.94	16.46	18.31
	18.60	18.80	19.30	19.33	0.22	0.54	0.55	0.60	0.84	1.48
	2.00	2.14	3.08	3.91	4.12	4.19	9.60	10.40	11.75	12.02
Artr	0.64	0.71	1.09	1.11	1.07	1.14	1.63	1.66	2.06	[illegible]
	2.35	2.42	5.15	5.60	6.83	6.89	1.33	1.35	1.52	1.60
	15.06	15.10	16.70	16.86	5.40	5.54	13.40	14.11	14.13	1451
	14.91	15.37	16.72	17.90	19.97	20.00	0.00	0.53	0.87	1.35
Amal	10.99	12.05	17.34	19.17	2.54	2.66	2.84	6.42	7.75	9.86
	10.04	10.11	10.60	14.50	16.49	19.20	1.47	1.70	1.90	1.94
	2.16	3.09	5.35	5.51	5.68	11.30	14.83	14.88	15.41	[illegible]
	15.90	16.92	17.65	19.17	4.50	6.00	11.14	16.65	11.85	[illegible]
	17.45	17.60	19.05	19.18	19.35	19.51	4.98	5.16	5.45	[illegible]

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83.C.2.2.4-61

2S 100W 26 SENW

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Mixed Mt Shrub

Non-Permanent Transect # 11

Date 18 July 75

[illegible]

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Syor	14.58	14.93	15.03	15.07	15.36	15.38	15.89	15.96	16.70	16.80
	3.90	3.99	6.00	6.08	6.39	6.71	7.20	9.20	10.80	17.50
	2.87	2.91	3.15	3.24	4.40	4.78	5.36	5.45	7.05	7.14
	7.31	7.38	7.89	8,02	8,48	8.73	8.80	9,27	9,60	10.20
	13.28	13.85	14.27	14,65	15,40	15,46	15,58	15.64	16.68	16.76
	19.20	20.00								
Artr	2.08	2.42	2.56	3,12	3.38	3.65	5.85	6.30	6.71	7.50
	8.05	8.11	9.65	9.98	10.35	10.78	18.08	18.92	1.03	1.06
	1.81	1.92	2.90	3.16	3.31	3.49	3.65	3.91	4.18	4.25
	8.40	8.52	8.74	9.04	12.85	13.23	15.49	16.13		
Amut	5.85	6.64	6.88	8.10	8.64	8.72	8.95	9.19	11.05	11.30
	11.38	11.44	11.57	11.63	12.55	12.68	12.98	13.55	13.80	13.83
	13.95	14.30	16.29	18.56						
Rowo	5.65	5.90								

83.C.2.2.4-6.2

LINE-STRIP DATA SHEET

1 SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

tation Type Mixed Brush Non-Permanent Transect # 12
2S R 100W S 9 1/4 1/4 S SENE Transect Length 100 m.
spect (degrees) 270° Slope (degrees) 5° Elevation (feet) 8420'
ield Analyst(s) Ellis/Baker Date 18 July '75
ite Description Shallow, shaly soil on saddle adjacent to lakes QA Check RDM 7/23

spell out fully RDM

pecies	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
hoficarpos 1 Symph. oreophilus	33	4	20	43	37	37	38	normal
anchier utahensis 2 Amel. utah.	32	5	13	12	20	18	20	die back
carpus montanus 3 Cerco. mont.	17	5	1	2	0	0	0	normal
4 Chryso. viscidiflorus	20	3	15	39	19	15	10	↓
5 Artemisia tridentata	14	3	11	33	0	16	24	
6 Ribes inerme	44	5	0	0	0	0	1	
7 Pseudotsuga menziesii	4	5	0	0	0	0	1	
8								
9								
10								

Intercepts (m)

use 4-letter code RDM

pecies	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
ryso. viscidiflor	8.51	8.69	19.90	20.00	9.53	9.61	11.85	12.02	1.48	1.65
	2.23	2.44	2.73	2.76						
mph. oreophilus	12.61	12.69	12.75	13.00	13.20	13.70	15.76	16.20	17.30	17.5
	19.67	19.71	1.00	1.02	4.57	5.13	5.28	5.75	5.90	5.30
	7.21	7.29	7.51	7.63	9.42	10.10	12.87	15.55	15.82	15.95
	16.86	17.12	18.15	18.39	18.89	19.40	.55	1.30		
lanchier ut.	11.05	11.23	11.31	11.44	12.08	12.30	12.45	12.17	13.00	15.18
	13.89	14.10	14.15	14.70	14.85	15.78	16.40	17.15	17.20	17.75
	18.42	18.54	3.28	4.95	5.07	5.30	8.56	8.68	9.70	13.92
	14.10	15.00	19.36	19.41	19.15	20.00	0	.50	1.01	1.37
	2.70	2.84	2.89	3.04	11.85	15.28				
tr. tridnt	18.02	18.15	2.10	3.14	5.67	5.92	8.22	9.50	11.41	11.68
	16.82	17.11	17.91	18.09	2.18	2.50	4.64	4.68	[illegible]	[illegible]

2S 100W 59 SENE

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

83.C.2.2.4-63

Project 83

Sheet 2 of 2

Vegetation Type Mixed brush

Non-Permanent Transect # 12

Date 18 July 75
RAM 7/23

Intercepts (m)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Symphioreophilus	6.56	6.71	7.68	7.95	8.50	8.60	17.24	17.64	19.12	19.98
	2.51	2.55	6.64	7.00	7.26	7.41	8.05	8.40	9.82	9.95
	10.37	10.90	11.17	11.35	.68	.93	1.12	1.34	10.70	11.27
	18.09	18.23								
melan. utah	5.70	5.58	8.89	7.61	8.15	8.30	8.90	9.57	9.67	1.000
	10.06	10.32	16.52	17.42	17.51	17.93	18.08	18.32	18.34	18.81
	19.00	19.32	1.93	2.30	3.61	3.67	7.05	7.18	7.92	11.18
	12.47	12.55	14.25	14.44	15.22	15.35	19.12	19.18	0	.25
	5.80	5.83	8.85	8.90	9.22	11.40	12.42	12.62	14.80	14.90
	15.65	15.92	16.42	16.72	17.29	17.59	18.29	18.18		
timos tridat.	7.44	7.99	15.03	15.11	.90	1.13	3.54	4.07	4.30	4.40
	8.64	8.80	12.60	12.82	13.08	13.32				

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83.C.2.24-64

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Mixed Brush   Non-Permanent Transect # 13
T 2S R 100W S 4 1/4 1/4 S SE/SE Transect Length 100 m.
Aspect (degrees) 80° Slope (degrees) 30° Elevation (feet) 8500'
Field Analyst(s) Ellis/Baker Date 18 July 75
Site Description Steep hillside, snow collecting area - young Pinus QA Check RDM 7/23

Species spell out fully RDM	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
melanchier utahensis 1 Amelanch utah	32	5	36	19	12	16	19	Normal
2 Prunus virginiana	23	5	51	30	19	10	–	↓
3 Quercus gambelii	25	5	5	-	16	–	18	
4 Rosa woodsii	41	4	8	1	5	2	–	
oreophilus 5 Symph oreophilus	33	4	5	15	49	68	43	
temisia 6 Art. tridentata	14	3	–	–	14	16	–	
7								
8								
9								
10								

Intercepts (m)

Species 4-letter RDM code	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Prunus vir.	1.0	2.0	1.05	1.37	4.35	5.80 ~~7.00~~	5.70	5.85	6.05	6.22
	6.40	7.18	9.82	10.30	18.90	19.20	0	.40	2.20	2.45
	2.90	3.08	3.30	3.45	3.90	4.10	4.40	4.70	4.80	4.90
	5.20	5.65	6.00	7.70	8.70	9.50	9.10	12.40	12.70	12.95
	15.70	16.90	19.05	19.70						
Quercus gambeli	.39	.90	1.50	1.95	3.41	3.80	3.90	4.35	5.60	5.75
	6.05	7.15	7.90	8.20	~~15.44~~	~~15.21~~	~~15.53~~	~~15.60~~	~~15.75~~	~~16.05~~
	1525	1725	1750	1900						
melanch. utah	.70	.90	1.2	1.37	1.35	2.03	2.12	2.40	3.50	3.68
	4.61	4.68	4.95	5.10	7.30	7.95	8.35	9.10	10.32	14.50
	15.55	20.00	0	5.10	5.45	7.25	14.00	14.60	14.65	15.50
	17.60	18.20	18.30	19.05	19.50	20.00				
Symph. or.	5.48	5.55	5.78	5.90	7.00	7.25	7.38	7.55	7.95	8.15
	15.30	15.50	13.45	13.75	17.40	17.60	17.70	18.25	3.36	3.38
	9.10	9.25	12.60	12.75	14.50	14.65	16.95	17.50		

2S 100W S4 SESE.

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

83. C. [illegible]

Project 83

Sheet 2 of 2

Vegetation Type MIXED BRUSH

Non-Permanent Transect # 13

rom 7/23

Date 18 July '75

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Rosa	3.12	3.30	8.80	9.20	12.90	13.55	14.20	14.85		
melanch. utah	0	.80	1.30	5.15	5.40	5.75	6.15	7.60	9.95	10.37
	11.76	11.95	13.97	14.03	14.30	15.21	16.87	17.10	4.15	6.35
	7.42	7.80	8.50	13.52	14.20	14.51	15.10	15.43	17.79	17.81
	18.15	18.32	18.93	19.08	19.33	19.70	19.80	20.00	0	3.05
	5.72	12.05	12.70	13.00	13.80	14.00	17.01	17.09	18.25	19.80
	19.90	20.00								
runus vir.	7.42	9.60	14.50	14.63	16.63	16.72				
ymphor. ③	11.20	12.15								
oreophilus										
ymph. oreophilus	2.20	2.38	8.70	9.10	9.60	9.80	10.33	10.52	14.70	15.00
①	15.10	15.31	16.55	17.47	19.71	20.00	0	.60	.90	1.20
	1.35	1.90	2.20	2.75	2.95	3.10	3.25	3.53	4.40	4.50
	7.10	7.31	7.90	8.28	8.75	8.85	9.80	10.10	10.90	11.05
	12.40	12.50	13.09	13.41	13.52	13.75	13.83	13.85	14.42	14.73
rti tridentata	10.93	11.21	15.52	16.10	17.62	17.40	18.78	18.82	19.20	19.91
	6.20	6.80	15.52	16.01	17.09	17.40	17.85	17.93	18.20	18.91
ymph. ②	15.50	15.55	16.00	16.48	16.83	16.99	17.30	17.42	0	3.0
oreophilus	3.30	3.73	4.24	4.40	4.70	4.85	4.70	5.55	[illegible]	[illegible]
	6.12	6.50	6.70	7.65	8.55	9.45	10.55	10.71	10.93	11.35

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83.C.2.2.4-6

QUADRAT DATA SHEET
HERBACEOUS STRATUM

1S 99W S32 SESW

Project 83
Sheet 1 of 1

Vegetation Type MIXED BRUSH Transect # 1 (14) Date 22 July 75
Vories / Baker

Percent of Total · Each Species

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
[illegible]	217	6 ✓	1	3																		
[illegible]	287	2	4	T																		
[illegible]	054	2 ✓		T		1		3		6				1				T				
Oryzopsis hymen.	100	2		1		4				3				4		2		2		10		
[illegible]	155	4	1	1																	1	1
[illegible] caesp	103	2 ✓	1	1	1	T			4	4			3	1			17	8	3	4	6	4
Linum lewisii	140	2		1	1	1			1	1			19	5			1	T	3	T	1	T
[illegible] flora.	175	2			1	T													1	T	2	2
[illegible] scop.	194	2			1	T							2	1			5	1	1	T	3	1
[illegible]	198	2			1	T			2	T												
Crepis acuminata	243	6					3	4														
[illegible]	162	6					1	2														
[illegible]	124	6					3	3														
Phlox [illegible]	156	7							3	T	1	T			3	T						
[illegible]	127	3									18	20			6	5						
Stipa comata	115	7										12		3		20		8				6
Koeleria gracil.	020	6										4										4
Eriogonum [illegible]	230	2															1	T				
Erysimum asperum	270	7																	3	2		

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83.C.2.2.4-6+

2S 99W S17 NW·NW

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type MIXED PRAIRIE

SHRUBS / BAKER

Transect # 2 (15)

glum.

Date 22 July 75

Percent of Total · Each Species

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
uchera perlilin	301	6	1	2			1	1														
gropyr. trachy	054	2		2				12				1				1				T		T
estuca idahoensis	207	2		7		2		3		8		5		10		8		2				
ichystima mrsin.	164	2	4	4	2	2																
riogonum umbellatum	128	7	6	5	5	4			14	7	8	8			16	18					11	5
[illegible]	274	6	1	1			2	1	1	T					1	1						
ypsantha sericea	194	7			3	2			1	1					1	1	1	T				
eleria gracilis	090	5				1		2						2								
edicrum boreale	174	6					2	3														
upinus caudatus	271	2					1	T	1	3			2	2								
[illegible]	243	6					2	2														
[illegible] fines.	207	5					1	1	1	1												
inum lewisii	150	2							1	1												
hlox longifolia	156	2							1	T												
ryzopsis hymenoides	100	6							2	3												
[illegible]	[illegible]	6													1	1						
phaeral. coccin.	181	2													1	1						
[illegible] cincr.	200	2																3				

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83 C. 2.2. 1. 68

QUADRAT DATA SHEET
HERBACEOUS STRATUM

3(16)

Project 83
Sheet 1 of 1

Vegetation Type Mixed Shrub
Transect # [illegible]
Type Perm
T [illegible]5 R 100W S 26 1/4 1/4 S SENW
Quadrat Size 1.5 m²
Aspect (degrees) 10
Slope (degrees) 11°
Elevation (feet) 7840
Field Analyst(s) Vories
Date July 15, 1975
Site Description
QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
? Angelica ampla ~~[illegible]~~	057	2-7	2	1			3	3			1	1										
Carex geyeri	160	2		4		T		4		5		8		T								
Ipomopsis aggregata	273	4			1	2											1	1				
Collinsia parviflora	217	6-7			2	T	1	T	1	T	5	T										
Agropyron trachycaulum	[illegible]	2-4						T				2		2				1				
Mahonia repens	161	2					5	4														
Comandra umbellata	090	2							1	1	3	[illegible]	3	1			[illegible]	[illegible]			21	5
Br[illegible]s tectorum	067	7							*		4	T									1	1
Eriogonum umbellatum	[illegible]	6									2	6										
Unknown #1	384	2									1	2			1	1					2	3
Cryptantha sericea	104	2											2	1			3	T				
Penstemon caespitosus	163	2											1	2							1	1
Oryzopsis hymenoides	100	5														3		4		6		5
Physaria floribunda	175	5													1	1			5	1		
Phlox longifolia	156	2																	1	T	1	T
Astragalus chamaeleuce	208	2																			5	1
Agoseris glauca	211	2																			1	T

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83.C.2.2.4-69

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of

Vegetation Type Mixed Brush

Transect # 7 (17) Type Permanent

2S R 100W S 2 1/4 1/4 S NENW Quadrat Size .5 m^2

Aspect (degrees) 110 Slope (degrees) 23°

Elevation (feet) 7980

Field Analyst(s) Ellis, Baker

Date 18 July 75

Site Description

QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Carex geyeri	160	2		25		10		25		10		5		12		2		3		10		2
Eriogonum umbellatum	128	2	1	1																		
Collinsia parviflora	219	5	7	T																		
Agropyron smithii	052	2		T																		
Poa sp.	125	2		T																		
Galium boreale	083	4							6	1	4	1	5	1								
Achillea lanulosa	050	2											4	T								
Penstemon sp.	102	4															2	2			2	1
Crepis acuminata	243	2															1	T				
Bromus sp. marginatus	163	2																T				

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type MIXEDBRUSH Transect # 9(18) Type Perm
[illegible] 1S R 99W S 31 1/4 1/4 S NWNW Quadrat Size .5 m²
Aspect (degrees) 160 Slope (degrees) 18 Elevation (feet) 7640
Field Analyst(s) Ellis/Baker Date 18 July 75
Site Description QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code													-							
Oryzopsis hymenoides	100	2		1						1					—		—		—		—	
inum lewisii	190	4,5	3	2	2	2									—		—		—		—	
Cirsium sp.	138	2	1	1											—		—		—		—	
Haplopappus nuttallii	155	4	2	1	1	2	2	2	1	2	10	5	8	6	4	1	2	1	6	10	—	
Cryptantha sericea	174	2	1	T					1	1					—		—		—		—	
Penstemon caespitosus	103	2	2	T					2	1	1	T	1	1	—		—		—		—	
Gutierrezia sarothrae	127	3,5,6			1	1									—		—		—		—	
Ho[illegible]ia repens	124	2					8	5	2	1			6	4	-		1	1	1	7	--	
Carex sp.	068	2						T							—		—		—		—	
Balsamorhiza sagit.	063	6,7							1	5					—		—		—		—	
																			—		—	

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83.6.2.2.5-59

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

on TRACT

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper Transect # 1 Type Permanent

T 1S R 99W S 33 1/4 1/4 S SE¼ SE¼ Transect Length 100 m.

Aspect (degrees) 340° Slope (percent) 4% Elevation (feet) 7200

Field Analyst(s) Ellis, Koehler, Kestrel Date 5/29/75

Site Description SW of stake C6 of small mammal grid. QA Check J Aro

Mature stand, considerable shrub understory

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 P. edulis	2	2	–	2	–	–	–	normal
2 J. osteosperma	1	2	–	1	–	–	–	↓
3								
4								
5								

Species	Intercepts (~~cm~~) M I₁	I₂	I₁	I₂	I₁	I₂	I₁	I₂	Trunk Diameter (~~cm~~) inches of Each Tree
P. edulis	9.50	1.0							5½, 4
J. osteosperma									
	4.0	9.45							6, 16

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83.C.2.1.5-60

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Pinyon Juniper
Permanent Transect # 1

T 1S R 99W S 33 1/4 1/4 S SE1/4 SE1/4
Transect Length 100 m.

Aspect (degrees) 340°
Slope (percent) 7%
Elevation (feet) 7200

Field Analyst(s) Ellis Koehler Kestrel
Date 5/29/75

Site Description mature stand considerable shrub understory
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	3 4	4 5	5 Condition
1 Amelanchier U.T.	32	2	13		4			2
2 Pinus edulis	2	2	11		5	4		
3 A. ~~[illegible]~~ tridentata	14	2	54		42	35	50	34
4 Chrysothamnus	20	2	10	18	2		4	7
5 [illegible]	1	2	6	12	4	2		2
6 [illegible]	33	2			3	2		2
7 Tetradymia spinescens	31	2					10	
8								
9								
10								

Intercepts ~~(cm)~~ m

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Amelanchier alnifolia	2.42	2.89	.55	14			4.82	15.00	.50	[illegible]	[illegible]	[illegible]
	5.04	4.24	.20	4.10	5.25	.70	7.45	8.10	.60	5.40	8.45	.05
Pinus edulis	4.40	5.45	1.20	[illegible]			13.45	13.50	.65	17.50	1.20	.35
	2.45	3.00	.15	2.20	2.75	.60						
[illegible]	[illegible]						7.72	[illegible]	.25	[illegible]	0.75	.65
Juniperus [illegible]	4.40	4.70	.30	10.49	10.54	.07	4.90	5.50	.60	5		
	10											
A. tridentata	10.43	10.15	.10	11.93	12.40	.45	13.00	13.23	.30	13.40	[illegible]	.30

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83.6.2.2.5-61

1S 99W S33

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Pinyon Juniper

Permanent Transect # 1

Date 5/29/75

in M.

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Chry. viscidiflorus	11.47	11.70	.15	[illegible]	[illegible]	.10						
Artemisia tri	15.63	15.85	.15	[illegible]	9.65	.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.50
	[illegible]	13.05	.40	4.93	5.20	.25	14.89	14.92	.20	[illegible]		
	[illegible]	[illegible]	.25	7.05	12.00	[illegible]	[illegible]	[illegible]	.25	19.10	19.30	[illegible]
	0.25	0.50	.25	1.80	2.05	.25	4.10	4.30	15	5.70	5.75	.25
	6.??	7.10	.25	[illegible]	9.95	[illegible]	[illegible]	10.50	100	[illegible]	11.10	.50
	11.30	11.50	.20	[illegible]	[illegible]	.15	[illegible]	[illegible]	35	[illegible]	13.70	.50
	14.90	15.15	.60	15.00	15.35	.30	15.?0	16.10	35	16.35	16.35	.75
Juniperus sp	[illegible]											
	[illegible]	[illegible]	1.00	[illegible]	20.00	1.50	[illegible]					
	5.??	[illegible]	.15									
Tetradymia canescens	10.5?	10.51	.30									
cont.		17.25	[illegible]									
cont.	[illegible]	17.95	.90	[illegible]	17.60	.60						

QUADRAT DATA SHEET
HERBACEOUS STRATUM

53.6.2.2.5-62

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper
Transect # 1
Type Permanent

T 15 R 99W S 33 1/4 1/4 S SE1/4 SE1/4
Quadrat Size 100 cm

Aspect (degrees) 340°
Slope (percent) 7%
Elevation (feet) 7200

Field Analyst(s) Ellis, Koehler, Kestrel
Date 5/29/75

Site Description
QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA									
Species	Code #	Phenology Code										
Poa sp.	125	2	0.5		1.5						.5	
Eriogonum [illegible]	128	2		1.	2.							
A[illegible] sp.	166	2		0.5		T		1	1.			1
Agoseris glauca	K.V. ~~232~~ 211	2		T								
Senecio sp.	132	2			T							
Phlox longifolia	156	2&3			T							
Phacelia [illegible]	175	2&3			T							
[illegible]	108	2			T							
[illegible] sp.	77	2			T							
Koeleria [illegible]	90	2				T					[illegible]	
Phlox [illegible]	157	2&3			1.		T					2
Taraxacum officinale	203	2										
Oryzopsis hymenoides	100	2				1.				T		
A[illegible] sp.	58	2				T	T					1
~~[illegible]~~												
[illegible]	122	2							T			
Sihi Sitanion hystrix	112	2									0.5	1.
Cryptantha [illegible]	171	2									1.	1.
ASTRagalus sp.	62	2									T	

Soil depth [illegible]

1- 1½ cm.
2- 30.5
3.- 21 cm
4- 30.5
5- 30.5

83.6.2.2.5-63

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinion Juniper Transect # 2 Type Permanent

15 R 99 W S 13 1/4 1/4 S SW¼ NW¼ SW¼ Transect Length 100m

Aspect (degrees) 340° Slope (percent) 4% Elevation (feet) 6530

Field Analyst(s) Ellis, Koehler, Kochel Date 5/29/75

Site Description mature, large diameter, mod. open canopy QA Check JJ/MK

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2	2	–	–	–	–	[illegible]
2 Juos	1	2	3	3	1	1		↓
3								
4								
5								

Species	Intercepts ~~(cm)~~ M. I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
Pied	0.80	6.35	16.60	20.60					14.25, 16.0
Juos	19.70	24.10	3.70	4.80					12.75, 19.0, 24.5
									17.0, 19.87, 14.75
									13.12, 34.35

LINE-STRIP METHOD 83.6.2.2.5-64
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Piryon Juniper
Permanent Transect # 2
15 R 99 W S13 1/4 1/4 S SW1/4SW1/2/
Transect Length 100m
Aspect (degrees) 340°
Slope (percent) 4%
Elevation (feet) 6520
Field Analyst(s) Ellis, Koehler, Kestrel
Date 5/29/75
Site Description mature, large diameter, mod. open canopy
QA Check J Ano

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Ar-tri	14	2	62	105	21	87	75	[illegible]
2 Pied	2	2	–	1	–	–	–	|
3 Juos	1	2	-	1	2	–	1	|
4 Opm	37	2	3	~	3	–	1	|
5 Tida	31	2	–	–	-	2	–	V
6								
7								
8								
9								
10								

Intercepts (cm) m

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Ar-tr.	1.25	1.50	.35	2.71	2.99	.22	2.98	3.25	.25	3.23	3.42	.12
	3.72	3.91	.18	7.92	7.95	.25	9.52	9.90	.30	10.30	10.85	.55
	15.50	16.42	.55	11.40	20.40	.70	5.73	6.02	.70	7.60	7.82	.25
	11.55	12.90	1.00	12.60	12.98	.30	13.70	14.60	.90	8.69	9.21	.70
	10.12	10.39	.35	10.59	10.66	.14	11.75	11.85	.05	11.98	12.[illegible]	.18
	14.0	14.49	.50	15.10	15.55	.55	16.90	17.40	.45	18.12	18.33	.22
	0.55	1.25	.60	2.15	2.35	.25	4.63	4.80	.15	7.90	8.05	.12
	13.30	14.05	.65	11.[illegible]	11.80	.20						

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QUADRAT DATA SHEET 83.C.2.2.5-65
HERBACEOUS STRATUM

Project 83

P

Sheet 1 of 1

Vegetation Type PINYON-JUNIPER Transect # 2 Type permanent
15 R 99W S 13 1/4 1/4 S SW¼SW¼ Quadrat Size 100 m
Aspect (degrees) 340° Slope (percent) 4%
Elevation (feet) 6520
Field Analyst(s) Ellis
Date 5/29/75
Site Description decadent stand -
QA Check

Species	Code #	Phenology Code	1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA									
Agropyron trachycaulum	54	2	2		1	2	1				1	T
?. Haplopappus nuttallii (spinulosus)		2	1	0.5			2					
Poa secunda	108	2	2	2	4	2	1		T	5	2	1
Antennaria sp.	58	2	T				T		T			T
Oryzopsis hymenoides	100	2	T					1				
Kochia americana	90	2		1		0.5	3				T	3
Stipa sp.	114	2		4	1	T		3		.5	4	
[illegible]	157	3,4		1	T	T	1			3	1.5	1.5
Erigeron sp.	77	2,3		0.5		T						
Arenaria sp. eastwoodiae	K.V. 2-88 ~~60~~	2,3					T	T				
~~Antennaria sp.~~	~~58~~	~~2~~					~~T~~		~~T~~			
Descurainia [illegible]	52	2						1				
Sitanion hystrix	112	2								0.5		
Cryptantha sericea ~~sp.~~	K.V. 194 ~~71~~	2,3								1	1	

Other sp: Haplopappus acaulis

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LINE-STRIP DATA SHEET
MATURE TREE STRATUM 83.C.2.25-66

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper Transect # 3 Type Permanent

T25 R 99W S 1 1/4 1/4 S SE¼/SE¼ Transect Length 100m

Aspect (degrees) 140° Slope (percent) 7% Elevation (feet) 6600

Field Analyst(s) Koehler, Kestner Date 5/30/75

Site Description open canopy mature juniper trees QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juos	1	2	7	4	1	2	4	18 [illegible]
2 Pied	2	2	2	2		5	1	1
3 [illegible]					1			[illegible]
4								
5								

Intercepts (~~cm~~) M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter ~~(cm)~~ inches of Each Tree
Juos	14.55	15.80	16.20	17.10	16.85	18.70	18.50	20.02	[4.5] [5] [3.[illegible]] [3 [illegible]]
	15.90	20.60	7.40	8.20	12.60	15.03	2.40	9.50	5 [illegible] [8 [illegible] / 5 [illegible]]
	8.08	9.14	12.71	15.64	17.58	20.00			[4 35/64] [3 1/64, 2 [illegible]]
							✩		2 3/64, 1 21/64, 1 17/64, 2 [illegible]
									[9 14/64] [5 3/64, 7 [illegible]]
									[1 [illegible]] [2 [illegible], 2 [illegible], 4 [illegible]]
									[21 6/64] [27 [illegible]]
							31		[9 1/64 9 7/64]
							32		[19 12/64, 19 [illegible]]
Pi									[20 [illegible] 13 [illegible]]
									[22 3/64] [14 [illegible]]
Pied									[4 0/64] [2 [illegible]] [[illegible]]
								10	[3 1/64] [10 [illegible]]
									[1 [illegible]/64] [5 [illegible]] [3 [illegible]]
									[1 47/64] [3 [illegible]]

✩ Multiple stems summed

LINE-STRIP METHOD 83.L.2.5.5-67 227
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Pinyon Juniper
Permanent Transect # 3
T 2S R 99W S 1 1/4 1/4 S SE¼ SE¼
Transect Length 100 m
Aspect (degrees) 140°
Slope (percent) 7%
Elevation (feet) 6600
Field Analyst(s) Koehler, [illegible]
Date 5/30/75
Site Description open canopy, Pinyon Juniper, mature & immature trees
QA Check [illegible]

line 227°.

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Ar~~ca~~ tr	14	2	3	1	18	2	4	normal
2 Chvi	20	2	6		16	29	7	〃
3 Teca	31	2	1			2		〃
4 Pied	2	2		1	3		2	〃
5 A[illegible] ut	32	2			29	42		〃
6 Putr	24						1	〃
7 Juos	1	2					1	〃
8								
9								
10								

Intercepts (~~cm~~) M

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Pied	2.10	2.60	.15									
A[illegible]	8.50	8.54	.05	11.92	11.95	.05						
Ar tr	10.60	11.10	.65	7.30	8.10	1.00	15.40	16.0[illegible]	.65	13.[illegible]	14.[illegible]	.15
Putr	12.95	15.20	.20									

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QUADRAT DATA SHEET 83.C.2.2.5-68
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Pinyon Juniper
Transect # 3
Type Permanent
T 2S R 99W S 1 1/4 1/4 S SE1/4 SE1/4
Quadrat Size ~~100m~~ .5m²
Aspect (degrees) 140°
Slope (percent) 7%
Elevation (feet) 6600
Field Analyst(s) Koelling, [illegible]
Date 5/30/75
Site Description [illegible], [illegible] trees
QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover			NA									
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Chaenactis ~~sp.~~ douglasii	258 K.V. ~~69~~	2	T			T						T
unknown #1	204	2	T	T	T			T				
Aasm [illegible]	52	2	T									
PHIS	359	3		T								
AREN eastwoodiae Arenaria K.V.	288 ~~60~~	2		T								
Hasp Haplopappus [illegible]	155	2			T	T					T	
Sihi Sitanion hystrix	112	2				T			.5		T	
ERIG Erigeron	77	2				T	T					
AGRO Agropyron [illegible]	166	2								.5		T
STRE Streptanthus cordatus sp. K.V.	290	3								T		
PHYS Physaria acutifolia	175 K.V. ~~200~~	3								T		T
Phmu Phlox ~~[illegible]~~ muscoides	157	3									T	T
Poa sp.	125	2									T	

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83.C.2.2.5-69

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

On tract

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper (South) Transect # 4 Type PERM.

1S R 99W S 33 1/4 1/4 S SE 1/4 NE Transect Length 100 m

Aspect (degrees) Q1-4: 180°; 5-290° Slope (percent) Q1-4: 44%; 5-8% Elevation (feet) 6920'

Field Analyst(s) ELLIS/TURNER Date 30 May '75

Site Description Steep slope. Sparse vegetation - Station PJ-4-11. QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2	1	2				normal
2 Juos	1	2		1	1	2	1	normal
3								
4								
5								

Intercepts (~~cm~~) M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter ~~(cm)~~ of Each Tree inches
Pied	2.90	8.90	3.65	9.90					8.50, 7.62, 11.25
Juos	51.10	51.25	1.10	4.90	12.65	13.90	13.20	13.30	21.57, 17.25, 17.0
									28.75,

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LINE-STRIP METHOD 83.6.2.2.5-70
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

starting pt. H-11

Vegetation Type Pinyon-Juniper (SOUTH)
Permanent Transect # 4
15 R 99W S 33 1/4 1/4 S SE.NE
Transect Length 100m
Aspect (degrees) Quadrats 1-4 = 180° 5=[illegible]°
Slope (percent) 1-4 - 44 5=37%
Elevation (feet) 6920'
Field Analyst(s) Ellis / Turner
Date 5/22/75
Site Description Steep slope, Sparse vegetation, eroded
QA Check

change in aspect + slope from quadrat 4-5

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 CeMo	17	2	7	–	–	–	–	grazed
2 Atco	16	2	9	4	–	–	–	〃
3 Pied	2	2	4	–	–	–	3	〃
4 Chna	19	2	–	5	1	3	–	〃
5 Juos	1	2	–	1	–	1	–	〃
6 Artr	14	2	–	–	–	5	9	〃
7 Oppo	37	2	–	–	–	4	2	↓
8								
9								
10								

Intercepts (cm) M

Species	I₁	I₂	Dia	I₁	I₂	Dia	I₁	I₂	Dia	I₁	I₂	Dia
Cemo	4.9	10.9	.85 cm									
atco	2.93	13.75	.65									

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QUADRAT DATA SHEET 83.C.2.2.5-71
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type P-Juniper Transect # 4 Type PERM

15 R 99W S 33 1/4 1/4 S SESE Quadrat Size .5m²

Aspect (degrees) 180° Slope (percent) 49% Elevation (feet) 6920'

Field Analyst(s) Turner, Ellis Date 30 May '75

Site Description Steep QA Check

1/3 sp[illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA									
Species	Code #	Phenology Code										
Oryzopsis hymenoides	100	2	T	1			T	T	1.0	1.0		1
Eriogonum sp.	78	2,3		1				T	2.5			
Antennaria sp.	58	2		T						T		6
Agropyron sp.	166	2			4	4		T		1.0	4	5
Haplopappus nuttallii	155	2			1				.5		.5	
Lomatium sp.	180	4,5								.5		
Sisyrinchium sp.	205	3									T	

LINE-STRIP DATA SHEET 83.C.2.2.5-72
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinion Juniper Transect # 5 Type Perm

T 2S R 99W S 14 1/4 1/4 S NWSW Transect Length 100 m

Aspect (degrees) 330 Slope (percent) 13% Elevation (feet) 6800

Field Analyst(s) Kestrel. Keller Date 5/31/75

Site Description mature stand QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2	3	4	-	4	2	Reproducing
2 Juos	1	2	1	1	-	1	1	normal
3								
4								
5								

Intercepts (~~cm~~) M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter ~~(cm)~~ inches of Each Tree
Pied	6.37	7.00	11.90	17.01	3.50	9.82			3.2", 21.0", 3.8"
	11.14	20.80	4.35	6.30	6.35	8.05	17.90	19.80	4.5", 3.95", 6.0", [illegible]
	3.12	4.42							4.25", 3.50", 4.0"
									3.0", 3.5" 4.5"
Juos	12.20	14.30	16.10	18.30					27.0", 17.0", 4.8", 7.5"

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LINE-STRIP METHOD 83.C.2.2.5-73
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Pinyon Juniper
Permanent Transect # 5
25 R 99W S 14 1/4 1/4 S NW SW
Transect Length 100 m.
Aspect (degrees) 330°
Slope (percent) 13%
Elevation (feet) 6810
Field Analyst(s) Koehler, Ellis, [illegible]
Date 5/31/75
Site Description mature stand, good understory
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	46	12	40	34	39	normal
2 Chvi	20	2	19	12	6	10	15	normal
3 Putr	24	2	3		4			normal
4 Cemo	17	2	1	5	12	10		[illegible]
5 Amut	32	2	26	29	37	16	10	normal
6 SYMP or?	33	2		3	11	3	6	[illegible]
7 Pied	2	2	9	10		14	6	[illegible]
8 Juos	1	2	6	4	7	7	4	[illegible]
9 Oppo	37	2					2	normal
10								

Intercepts (cm) M

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Artr	2.93	1.10	.45	14.45	[illegible]	.42	12.45	[illegible]	.32	2.02	2.60	.21
	[illegible]	[illegible]	.26	[illegible]	[illegible]	.2	15.10	[illegible]	.13	4.04	4.19	.15
	3.97	4.10	.1	4.83	4.96	.33	6.70	7.00	.30	5.80	[illegible]	.11
	6.59	6.65	.42	15.03	15.19	.17						
SYMP	11.65	11.70	.5	[illegible]	6.05	.04	6.27	6.50	.10	17.16	[illegible]	[illegible]
	12.05	12.20	.18									
Putr	[illegible]	2.90	.37	11.25	11.60	.17	[illegible]	[illegible]	.04			
Cemo	9.83	[illegible]	.37	[illegible]	[illegible]	.41						

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LINE-STRIP DATA SHEET 83.C.2.2.5-74
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Pinyon Juniper Permanent Transect # 5 Date 5/31/75

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Amal	11.46	12.40	.76	12.41	13.12	.42	15.53	15.86	.29	12.00	12.84	.67
	13.68	14.30	.39	6.05	6.11	.07	6.62	6.70	.54	7.90	8.14	.21
	12.00	12.40	.41	15.30	15.43	.17	16.37	16.62	.28	5.87	6.02	.11
	19.68	20.50	.110									
Chvi	6.85	8.50	.76									
Pied	9.50	9.68	.29	15.32	16.12	.90	16.50	16.90	.33	18.70	19.65	.79
	2.90	3.90	.89									
Quos												

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QUADRAT DATA SHEET 83.C.2.2.5-75
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type PINION JUNIPER Transect # 5 Type PERM.

2S R 99W S 14 1/4 1/4 S NWSW Quadrat Size ~~100 m~~ .5m²

Aspect (degrees) 330 Slope (percent) 13%

Elevation (feet) 6800

Field Analyst(s) ELLIS

Date 5/31/75

Site Description pinon stand,

QA Check J. Ellis

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA									
Species	Code #	Phenology Code										
Agropyron sp.	166	2	2		T				T	T	T	T
Carex sp.	68	2	T									
Phlox multiflora	157	2	T	.5	.5		1.5		2			
Koeleria cristata	90	2		T								
Trifolium gymnocarpon	173	2		T		T						
Haplopappus nuttallii	155	2		T	T							
Poa secunda	108	2		1								
Erigeron sp.	102	2			T							
Eriogonum sp.	58	2					T					
Gutierrezia sarothrae	127	2					T					
Cryptantha sericea var.	194 ~~77~~	2						1	T			T
[illegible]	175	4						T				
Stipa sp.	114	2							2.5			T

LINE-STRIP DATA SHEET 83.C.2.2.5-76
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper
Transect # 6
Type Non-permanent
25 R 99W S 23
1/4 1/4 S SW/NE
Transect Length 100m
Aspect (degrees) 148
Slope (percent) 6° 10%
Elevation (feet) 7000
Field Analyst(s) Turner/Pack
Date 5/31/75
Site Description See shrub stratum
QA Check J [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2	3	3	3	2	7	porcupine damage
2 Juos	1	2	0	0	2	1	1	Overmature
3								
4								many seedlings
5								

Species	Intercepts ~~(cm)~~ M I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter ~~(cm)~~ inches of Each Tree
Pied	0.93	2.34	0.50	4.11	2.65	3.42	17.35	13.23	7.25, 7.87, 6.35, 5.60,
	12.0	13.55	15.09	19.58	2.05	4.62	[illegible] 5	11.22	3.35, 8.75, 4.93, 9.2
	14.60	16.05	2.65	5.32	4.75	5.65	15.07	16.92	3.13, 9.12, 9.13, 17.37
									7.42, 4.61, 3.38, 3.22,
									4.37, 6.93
Juos	5.30	8.55	11.75	14.35	18.20	20.0			21.3, 7.75, 25.1,
									17.12

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83.6.2.2.5-77
#4493

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

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Sheet 1 of 1

Vegetation Type Pinyon-Juniper
Non-Permanent Transect # 6
T 2S R 99W S 23 1/4 1/4 S SW/NE
Transect Length 100 m
Aspect (degrees) 148
Slope (percent) 6°
Elevation (feet) 7000
Field Analyst(s) Turner/Dick
Date 5/31/75
Site Description [illegible] mature stand - many dying old trees some new young trees
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Ar tr	14	2	40	13	11	12	15	Galls
2 Pu tr	24	2	13	8	4	3	3	normal
3 Ch na	19	2	10	13	1	4	1	"
4 Oppo	37	2	2					"
5 Pi ed	2	2	13	16	14	11	5	"
6 Ju os	1	2	3	2	2			"
7 Te ca	31	2		3	2			"
8								
9								

Intercepts (cm)/M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Ar tr	5.39	5.45	3.81	3.93	15.59	15.33	7.01	7.25	17.25	[illegible]
	14.[illegible]	14.37	2.93	3.10	17.29	[illegible]				
Ch na	[illegible]	7.09	6.67	6.78						
Pu tr	9.64	10.52	13.60	14.09	16.56	17.0	13.72	13.93		
Ju os	1.4	1.43								
Te ca	5.33	5.51								
Pi ed	3.23	3.45								

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83.6.2.2.5-78
45274

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper
Transect # 7
Type Non-[illegible]

15 R 99W S 21 1/4 1/4 S NE/SW
Transect Length 100m

Aspect (degrees) 102
Slope (percent) 12° 21%
Elevation (feet) 7200

Field Analyst(s) Turner/Peck
Date 5/31/75

Site Description diverse shrub understory
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pico	2	2	1	1	1			normal
2 Juos	1	2		1	2		5	"
3								
4								
5								

Species	Intercepts ~~(cm)~~ m I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter ~~(cm)~~ inches of Each Tree
Pico	17.[illegible]	18.32	5.23	9.31	[illegible]	[illegible]			14.01, 3.81, 12.32
Juos "	11.23	13.65	12.93	14.35					8.38, 5.14, 6.25, 9.62, 30.73, 14.[illegible]7, 14.01, 3.41

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LINE-STRIP DATA SHEET 83.C.2.2.5-79

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper
Non-Permanent Transect # 7
T 15 R 99W S 21 1/4 1/4 S SW/NE
Transect Length 100 m
Aspect (degrees) 102
Slope (percent) 12°
Elevation (feet) 7200
Field Analyst(s) Turner/Peck
Date 5/21/85
Site Description [illegible]
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Putr	24	2, 3	14	21	12	9	4	normal
2 Artr	14	2	2	5	5	5	14	[illegible]
3 Pied	2	2	2	4	13	7	2	normal
4 Cemo	17	2	5	1	4	18	2	
5 Amut	32	2	2	7	4	6	–	
6 Chvi	20	2	1	–	1	–	–	
7 Chna	19	2	–	1	–	–	–	
8 [illegible]	1	2	–	2	1	2	–	
9 Syor	33	2	–	–	5	2	–	
10								

Intercepts ~~(cm)~~ M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Putr	13.10	13.13	8.21	8.31	13.70	14.45	15.75	11.25	16.33	17.45
	16.40	16.49								
Amut	16.40	16.50	15.45	12.29						
Cemo	12.32	13.31	13.53	13.71	2.08	1.61	2.35	2.76	6.88	[illegible]
	11.30	11.42	12.94	12.45	1.98	2.08	~~2.65~~			
Artr	0.63	0.94	12.99	13.39	3.93	4.45	5.23	5.56	~~6.69~~	7.10
Syor	17.22	17.45								
Pied	6.25	6.53	14.65	14.72						

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LINE-STRIP DATA SHEET 83.6.2.2.5 -80
MATURE TREE STRATUM

Project B3
Sheet 1 of 1

Vegetation Type Pinyon-Juniper
Transect # 8
Type [illegible]
T 1S R 99W S 21 1/4 1/4 S NE/SW
Transect Length 100m
Aspect (degrees) 60
Slope (percent) 8° 14%
Elevation (feet) 7240
Field Analyst(s) Turner / Pick
Date 5/31/75
Site Description [illegible]
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juos	1	2	3	3	5.	3	1	normal
2 Pied.	2	2		1	1	4	3	"
3								
4								
5								

Species	Intercepts ~~(cm)~~ M								Trunk Diameter ~~(cm)~~ IN of Each Tree
	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	
Juos	2.83	4.49	7.85	13.10	15.33	17.94	6.37	8.62	11.50, 5.49, 6.75
	17.02	19.12	11.62	[illegible]	[illegible]	6.08	11.05	3.06	12.12, 8.12, 13.67
	5.52	5.53							9.4, 14.43, 14.65
									11.37, 5.72, 14.70
									4.90, 13.75, 3.66
Pied	0.93	5.30	1.55	2.73	12.73	15.65	1.43	6.23	3.78, 9.00, 4.77,
	8.95	9.55			11.93	12.10			8.00, 5.23,
									10.25, 11.73,
									3.27, 3.37

621
56[illegible]

83.C.2.2.5-81

LINE-STRIP DATA SHEET 62127

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper 1[illegible] Non-Permanent Transect # 8

T 9S R 99W S 21 1/4 1/4 S NE/SW Transect Length 100 m

Aspect (degrees) 60° Slope (percent) 8° Elevation (feet) 7240

Field Analyst(s) Turner/Pickle Date 5/31/75

Site Description see mature tree sheet QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	4	5	–	18	5	[illegible]
2 Pied	2	2	4	2	–	1	11	[illegible]
3 Juos	1	2	4	–	–	1	4	
4 Putr	24	2	1	1	2	2	2	
5 Chna	19	2	6	–	–	–	–	
6 Oppo	37	2	5	–	2	2	3	
7 Chvi	20	2	–	–	–	–	3	
8 Amut	32	2	–	–	–	–	2	↓
9								
10								

Intercepts (cm) M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Pied	5.52	5.96	9.40	10.32						
Putr	3.44	3.45	17.15	17.96						
Juos	19.15	19.35								

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LINE-STRIP DATA SHEET 83.C.2.2.5-82
MATURE TREE STRATUM

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Sheet 1 of 1

Vegetation Type Pinyon-Juniper
Transect # 9
Type ~~[illegible]~~
T 2S R 99W S 8 1/4 1/4 S SW/SW
Transect Length 100 m
Aspect (degrees) 320
Slope (percent) 10° 17%
Elevation (feet) 6900
Field Analyst(s) Turner / Pick
Date 5/31/75
Site Description [illegible]
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juos	1	2	4	2	2	3	3	galls
2 PIED	2	2	2	1	2	1	3	normal
3								
4								
5								

Species	Intercepts ~~(cm)~~ m I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter inches ~~(cm)~~ of Each Tree
Juos	3.70	4.38	11.20	12.65	13.09	15.35	18.60	13.9	9.30 17.50 15.10
	6.45	8.02	[illegible]	18.25	7.35	10.34			13.75 12.25 9.10
									14.50 8.50 8.56
									16.10 15.00 17.90
								11	32.30 12.00
PIED	8.55	12.70	1.31	5.24	15.42	19.75			13.70 12.95 9.30
									3.20 8.60 13.50
									6.03 13.80

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83.C.2.2.5-83

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

getation Type Pinyon-Juniper
Non-Permanent Transect # 9
T 2S R 99W S 8 1/4 1/4 S SW/SW
Transect Length 100m
Aspect (degrees) 220
Slope (percent) 10°
Elevation (feet) 6900
Field Analyst(s) Turner/Pick
Date 5/31/75
Site Description mature stand - sparse understory
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2			4	2	2	normal
2 Arnotr	14	2	1	1	2		1	adults
3 Putr	24	2		4	19	30	13	normal
4 Chna	19	2		1			1	"
5 Syor - sample	33	2				1	2	"
6 Teca	31	2	1		1			"
7 Oppo	37	2					1	"
8								
9								

Intercepts ~~(cm)~~ M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Teca	9.38	9.315	1							
Arno	11.30	11.91								
Pied	12.30	12.90								
Putr	0.35	1.01	1.65	1.74	13.10	13.15	16.04	16.10		

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LINE-STRIP DATA SHEET 83.C.2.2.5-84
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper   Transect # 10   Type NON-PERM

T 2S   R 99W   S 7   1/4 1/4 S NW SE   Transect Length 180 M.

Aspect (degrees) 110   Slope (percent) 30%   Elevation (feet) 7400'

Field Analyst(s) ELLIS / STATES   Date 6/1/75

Site Description   QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pinus edulis	2		3	2	3	2	0	normal
2 Juniperus osteosperma	1		1	1	0	0	1	"
3								
4								
5								

Intercepts (~~cm~~) meter

Species	I₁	I₂	I₁	I₂	I₁	I₂	I₁	I₂	Quadrat Trunk Diameter (cm) of Each Tree
Pinus edulis	7.3	9.8	17.20	20.00	5.4	9.6	13.2	20.0	15, 16.5, 19, 21
	11.[illegible]	[illegible].20							Q2: 20, 17
									Q3: 22, 14, 3,
									Q4: 14, 19
									(11)
Juniperus osteosperma	15.7	18.4	11.40	19.25					20, 28
									Q5: .49 cm

LINE-STRIP METHOD 83.C.2.2.5-85
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet ____ of ____

Vegetation Type PINYON-JUNIPER NON- Permanent Transect # 10
T 25 R 99W S 7 1/4 1/4 S NW SE Transect Length 100m
Aspect (degrees) 110 Slope (percent) 30 Elevation (feet) 7400'
Field Analyst(s) STATES / ELLIS Date 6/1/75
Site Description [illegible] SE slope
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Tetradymia canescens	31	2	1	1				[illegible]
2 Artemisia tridentata	14	2	28	8	7	17	13	[illegible]
3 Amelanchier vt.	32	2,3,4	7	3	21	24	6	[illegible]
4 Ceanothus martinii	K.V. 39	2		1	1			[illegible]
5 Purshia tridentata	24	234		6	[illegible]	1	1	[illegible]
6 Symphoricarpos oreophilus	33	2		2	3			normal
7 Pinus edulis	2	2	5	1	2	4	4	normal
8 Juniperus osteosperma	1	2		1			2	normal
9 Chrysothamnus nauseosus	19					1		normal
10								

Intercepts (~~cm~~) M

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Tetradymia canescens	.45	.47										
Artemisia tridentata	4.29	5.41		5.13	5.23		11.79	[illegible]		12.53	[illegible]	
	14.[illegible]	15.32		15.24	[illegible]		8.52	9.24		2.0	2.39	
	4.37	1.43										
Amelanchier vt.	6.9	5.5		.91	[illegible]		[illegible]	[illegible]		11.5	[illegible]	
	15.[illegible]	15.[illegible]		[illegible]	[illegible]		0.0	0.41				
Symphoricarpos [illegible]	[illegible]	14.3		3.3	14.9							
Purshia tridentata	[illegible]	[illegible]										
[illegible]	2.52	2.615										
Pinus edulis	5.20	6.[illegible]		9.07	9.[illegible]		[illegible]	10.71				

* [illegible]
[illegible]

LINE-STRIP DATA SHEET 83.C.2.25-86
MATURE TREE STRATUM

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Sheet 1 of 1

Vegetation Type Pinyon-Juniper Transect # 11 Type [illegible]
T 2S R 99W S 2 1/4 1/4 S SE/NW Transect Length [illegible]
Aspect (degrees) 342° Slope (percent) 3° 5% Elevation (feet) 7000
Field Analyst(s) Turner/Pick Date 6/11/75.
Site Description mature - [illegible] QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juos	1	2	7	5	5	3	8	[illegible]
2 Pieo	2	2	1	1	2	2	0	" [illegible]
3								young (1%)
4								
5								

Species	Intercepts (cm) M I₁	I₂	I₁	I₂	I₁	I₂	I₁	I₂	Trunk Diameter (cm) of Each Tree inches
Juos	0.33	5.01	18.52	18.90	19.54	19.93	4.32	5.46	14.93, 11.76, 7.13,
	16.01	17.21	6.02	[illegible]	1.20	0.91	3.19	5.24	6.85, 10.02, 10.67
	11.60	13.43	1.25	3.58	14.49	14.75	17.10	17.45	12.36, 7.50, 3.37
									12.25, 10.43, 14.25
									12.56, 3.51, 11.72,
									11.24, 9.24 11.70
								(14)	9.47, 11.23, 7.49
									13.85 7.02, 10.00
[illegible]	[illegible]	17.12	1.16	2.98	1.30	3.66	10.42	11.54	11.37, 15.28, 12.[illegible]
	4.52	8.35	[illegible]						9.77, 16.13, 15.86

83.C.2.2.5-87

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 33

Sheet 1 of 1

Vegetation Type Pinyon - Juniper　　Non-Permanent Transect # 11

T 2S　R 99W　S 2　1/4 1/4 S SE/NW　　Transect Length 100

Aspect (degrees) 342°　Slope (percent) 3°　Elevation (feet) 7050

Field Analyst(s) Turner/Pick　　Date 6/1/75

Site Description mature [illegible] young pine　　QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Cemo	17	2	8	3			4	normal
2 Artr	14	2	2	1	4	4	24	
3 Amuh	32	2	2					
4 PiED	2	2	5	2		2	9	
5 Oppo	37	2		3				
6 Syor	33	2			1			
7 Puta	24	2			1	1	3	
8								
9								
10								

Intercepts ~~(cm)~~ m

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Cemo	6.01	6.55								
PiED	3.08	3.04	4.18	4.98	13.11	14.20				
Artr	10.90	11.15	17.15	17.40						

83.C.2.25-88

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 03

Sheet 1 of 1

Vegetation Type Pinyon-Juniper Transect # 12 Type [illegible]

T 15 R 99W S 24 1/4 1/4 S NE/SW Transect Length 100 m

Aspect (degrees) 76° Slope (percent) 2° 3% Elevation (feet) 6650

Field Analyst(s) Turner/Price Date 6/1/75

Site Description [illegible] QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2		1		1		normal
2 Juos	1	2	1	2			4	S
3								
4								
5								

Species	Intercepts ~~(cm)~~ m I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter ~~(cm)~~ Inches of Each Tree
Pied	10.22	21.87							21.18, 25.72
Juos	16.[illegible]	13.61	17.[illegible]	20.00					21.24, 16.51, 15.97, 13.44, 14.00, 15.54 22.10

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83.6.2.2.5 -89

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper / Sage
Non-Permanent Transect # 12
T 1S R 99W S 24 1/4 1/4 S NE/SW
Transect Length 100m
Aspect (degrees) 76°
Slope (percent) 20°
Elevation (feet) 6550
Field Analyst(s) Turner/Rick
Date 6/1/75
Site Description See within-line sheet
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	41	56	17	26	34	[illegible]
2 Pr 1	2	2	3					[illegible]
3 Juos	1	2	1	1				
4 Chvi	20	2			9	1		
5 ~~[illegible]~~	~~14~~	~~2~~				~~1~~		
6 [illegible]	19	2				1		
7								
8								
9								
10								

Intercepts (~~cm~~) M

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Artr	3.85	4.02	5.54	5.82	6.55	6.70	7.45	7.70	9.60	10.7[illegible]
	12.67	13.10	13.75	14.38	18.51	19.50	19.78	19.85	4.65	[illegible]
	7.58	7.85	8.45	8.62	9.15	9.28	9.35	10.30	11.22	11.32
	12.91	13.22	13.65	13.82	14.82	15.10	15.20	15.88	16.13	[illegible]
	13.20	13.35	13.57	14.50	17.05	17.30	18.10	[illegible]	2.67	[illegible]
	4.85	5.72	10.60	10.92	11.93	13.20	1.39	1.47	2.07	2.[illegible]
	2.73	4.13	9.25	9.25	9.88	10.85				
Artr	15.24	[illegible]	18.17	19.24	19.55	20.10				

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83.C.2.2.5-90

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper Transect # 13 Type Permanent

T 25 R 99W S 16 1/4 1/4 S NWNW Transect Length 100 m.

Aspect (degrees) 97° Slope (percent) 9% Elevation (feet) 7400'

Field Analyst(s) Kor[illegible], V[illegible], K[illegible] Date 6/2/75

Site Description Young stand with grass understory QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Junip osteosp.	1	2	2	1	2	—	1	[illegible]
2 Pinus edulis	2	2	3	4	5	8	5	normal
3					25			
4								
5								

Species	Intercepts ~~(cm)~~ Meter I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter ~~(cm)~~ inches of Each Tree
Juniperus osteosperma	3.12	4.97	11.63	13.97					5.5, 3.5
	9								4.5,
									3.0, 4.75,
	13.64	14.11	18.93	19.61					3.5
Pinus edulis	13.97	16.59	16.37	19.90					7.5, 9.0, 3.5,
	8.92	18.80							11.0, 6.0, 4.5, 6.0
	17.48	21.5							4.0, 4.1, 7.5, 9.75,
	[illegible]	5.63	9.21	12.01					
									5.0, 4.5, 4.0, 3.25,
	9.01	10.6[illegible]	15.93	16.73				100	
									7.0, 6.5, 6.0, [illegible],
									6.25

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83.C.2.2.5-91

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Pinyon Juniper
Permanent Transect # 13
T 25 R 99W S 8 1/4 1/4 S NW NW
Transect Length 100 m.
Aspect (degrees) 97°
Slope (percent) 2%
Elevation (feet)
Field Analyst(s) Norris Kohler Vestal
Date 6/2/75
Site Description Pinyon Juniper ridge top young stan
QA Check [illegible]

.35 mi past road turnoff to Big Sage Well pad, on E side of road.

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Amelanchier utahensis	32	2	3	4		4	2	normal
2 Opuntia fragilis	38	2	7		4		3	normal
3 Artemisia tridentata	14	2	31	51	63	50	26	normal
4 Pinus edulis	2	2	7	3	2	5	2	normal
5 Juniperus osteosperma	1	2	4	1	2	2	4	under dens
6 Chry. nauseosus	19	2		6				normal
7								
8								
9								
10								

Intercepts ~~(cm)~~ M.

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Art. tridentata	1.19	1.80	.52	7.15	7.50	.35	9.57	10.[illegible]	.74	11.50	11.81	.29
	3.63	4.08	.29	6.90	6.98	.08	1.10	1.43	.32	1.89	1.94	.05
	3.30	3.69	.34	9.54	9.59	.05	15.00	15.[illegible]	.54	19.35	19.7[illegible]	.32
Op. fragilis	14.29	14.34	.06									
Junip osteosperma	6.52	7.14	.62									

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83.C.2.2.5 - 92

QUADRAT DATA SHEET
HERBACEOUS STRATUM

OFF MKT.

Project 83
Sheet 1 of 1

Vegetation Type Pinyon Juniper
Transect # 13
Type P[illegible]
2S R 99W S 16 1/4 1/4 S NWNW
Quadrat Size .5m²
Aspect (degrees) 97°
Slope (percent) 2%
Elevation (feet) 7400'
Field Analyst(s) Vories, Koehler, [illegible]
Date 6/2/75
Site Description young stand w/grass understory
QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover	NA											
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Koeleria cristata gracilis	90	2	1.5	.5	T	T	T	T			.5	
Trifolium gymnocarpon	173	2 & 3		T		T	T				T	
Agropyron spp	166	2		T	T	.5		T	T			T
Poa spp	125	2		T	T					T	.5	T
Carex geyeri	160	2			2.5			T				
Sphaeralcea coccinea	181	2			T			T			T	
Poa sandbergii Festuca idahoensis	207	2			T		.5	1.		T		
Astragalus chamaeluce	208	3			.5							
Androsace septentrionalis	56	2			T							
Cryptantha sericea	194	2			1.0	T	.5			T		
Phlox hoodi	209	2			T							
~~[illegible]~~	~~166~~	~~2~~			~~T~~							
Phlox [illegible]	157	2			T							
Poa secunda sandbergii	108	2				T						
Oryzopsis hymenoides	100	2				T	2.					5.
Bromus tectorum	67	2				.5						
[illegible] sp.	168	2				T						
Eriogonum sp.	205	2					T		T			
[illegible] Nelson	10% KVO 210	2							T			
[illegible]	211	2							T			
[illegible]	212	2								5.		
Erigeron sp.	77									T		
Sitanion hystrix	112											T
Crepis sp.	213											T

83.C.2.2.5 -93

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper Transect # 14 Type [illegible]

T 15 R 99W S 11 1/4 1/4 S NESW Transect Length 100 m.

Aspect (degrees) 340° Slope (percent) 8% Elevation (feet) 6600

Field Analyst(s) [illegible] Date 6/3/75

Site Description [illegible] QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 [illegible]	1	2	2	2			3	decadent
2								
3								
4								
5								

Species	Intercepts (cm) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
[illegible]	1.84	2.21	3.33	4.35					8.5 13.5
									20.5 21.5
	15.51	18.04							26.0, 27.0, 7.5

LINE-STRIP DATA SHEET 83.6.2.25-94

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper Non-Permanent Transect # 14

T 15 R 99W S 11 1/4 1/4 S NE SW Transect Length 100m

Aspect (degrees) 340° Slope (percent) 5% Elevation (feet) 6600

Field Analyst(s) Kochler Vories Koehel Date 6/3/75

Site Description [illegible] Juniper stand QA Check J Aro

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Cerco. montanus	17	2	7	4				fair
2 Amel. utahensis	32	2	1					normal
3 Junip. osteosperma	1	2	2			1		decadent
4 Pinus edulis	2	2	2	4				poor
5 Art. tridentata	14	2	45	17	39	23	18	[illegible]
6 Opuntia [illegible]	38	2		4	1			good
7 Chrys. nauseosus	19	2		17	32	14		fair
8 Symph. [illegible]	33	2		1	4			normal
9 Tetra canescens oreophilus	31	2			17			normal
10 Chry. viscidiflorus	20	2				3		normal

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Art. tridentata	2.80	3.05	13.20	13.37	6.00	6.61	7.20	7.42	7.17	7.49
	12.16	12.23	14.60	14.65	15.04	15.68	16.30	17.14	17.74	18.00
	18.39	18.93								
Purshia tridentata	3.49	5.13	10.50	11.32						
Junip. osteosperma	15.70	15.94								
[illegible]	[illegible]	2.43	[illegible]	[illegible]	2.94	3.16				
Chry. viscidiflorus	2.05	2.58	3.59	4.10	5.40	5.60	9.50	9.73		

17
63

LINE-STRIP DATA SHEET 83.C.2.2.5-95
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinon Juniper Transect # 15 Type Permanent

T 15 R 99W S 21 1/4 1/4 S NWSE Transect Length 100m.

Aspect (degrees) 125 Slope (percent) $7^{0\ 10}$-12% Elevation (feet) 7120'

Field Analyst(s) ELUS/WBRISS Date 6 July 75

Site Description Mature stand grass, scattered shrub understory QA Check J/Ws

75 yds E of 1st cattle guard on Piceance Rd.

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juniperus osteosperma	1	2	2	3.	2	1.	2	
2 Pinus edulis	2	2			2	1	3	
3								
4								
5							-	

Species	Intercepts (cm) I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter (cm) of Each Tree
Ju OS	1.20	1.90	16.95	20.00	5.0	1.25	7.42	13.25	Q1: 53, 66
	12.10	13.92	16.20	20.00	7.40	11.0	16.35	17.35	Q2: 39, 32, 21
	6.30	9.30							Q3: 44, 33, 36
									Q4: 24
									Q5: 53, 24
Pinus edulis	1.10	5.30	11.2	16.30	13.4	20.0	6.83	8.80	Q2: 40,
	17.80	17.95							Q3: 52, 46
									Q4: 28,
									Q5: 39, 40, 49

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83.C.2.2.5-16

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper

Permanent Transect # 15

15 R 99W S 21 1/4 1/4 S NW SE

Transect Length 100 m.

Aspect (degrees) 125

Slope (percent) 7°-12%

Elevation (feet)

Field Analyst(s) ELLIS/URIES

Date 6 June 75

Site Description

QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Cercocarpus montanus	17	2,3	2	6		1	1	
2 Purshia tridentata	24	2	–	4	–	–	1	
3 [illegible]	14	2	–	5	4	–	–	
4								
5								
6								
7								
8								
9								
10								

Intercepts (cm)

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Cercocarpus montanus	1.09	1.53	.5	2.63	[illegible]	1.0						
Putr	6.05	6.39	.25	6.55	7.03	.30						
[illegible]	7.10	7.12	.9									

QUADRAT DATA SHEET 83.C.2.2.5 -97
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type P-J
Transect # 15
Type Perm
T 1S R 99W S 21 1/4 1/4 S NW SE
Quadrat Size .5m²
Aspect (degrees) 125
Slope (percent) 12%
Elevation (feet) 7120
Field Analyst(s) Ellis / Vosires
Date 6 Jun 75
Site Description
QA Check Vlas

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species		NA	—	—	—	—	—	—	—	—	—	—
Species	Code #	Phenology Code										
Ory hymen	100	2	1	T	T		3		3	2		
Agro trachycaulum sp.	1166	2	1	T						T		1
Carex geyerii	160	2		2								
Cymopteris sp	168	2		T			---		T			
UIPJ15	256	3 --		T								
Poa sp.	125	2			5					T		
Balsam Sag.	63	2			1							
Erigeron sp.	77	4			T		T					
Cheno fremont	198	2						T				
Haplo nutall	155	2							1			1
Euphorbia sp.	80	2							T			
Desc pinnata	255	3									T	T
Lappula redowskii	199	3									T	

83.C.2.2.5 - 10

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type PINYON JUNIPER Transect # #16 Type Non Perm

T 2S R 99W S 13 1/4 1/4 S SESE Transect Length 100 meters

Aspect (degrees) 50° Slope (degrees) 17° Elevation (feet) 7050

Field Analyst(s) Ellis, Harding Date 15 July 75

Site Description mixed Stand, shrub understory QA Check RBM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juniperus osteosperma	1	5 [illegible] 2.	1	1	3	2	1	GALLS
2 Pinyon edulis	2	5 2.	0	2	1	0	2	[illegible]? [illegible]
3								
4								
5								

Species	Intercepts (m) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree.
Juos	2.80	5.20	15.30	15.50	16.70	17.30	1.55	4.95	Q1 : {35-21-18-10},
	7.10	9.95	10.50	11.15	12.60	14.63	5.92	9.56	Q2 : {30-33 -10}
									Q3 : 72, 45, 32,
									Q4 : 21, 23,
									Q5 : 26,
									Q1 : ZERO
Pied	10.00	13.75	17.95	20.00	0.00	0.26	14.65	18.50	Q2 : 24, 12 //
	6.80	9.90	19.20	20.00	0.00	5.20			Q3 : 40
									Q4 : ZERO
									Q5 : 45, 12

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83.C.2.2.5-99

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon- Juniper Non-Permanent Transect # 16

T 2S R 99W S 13 1/4 1/4 S SESE Transect Length 100 meters

Aspect (degrees) 50° Slope (degrees) 17° Elevation (feet) 7050

Field Analyst(s) Harris + Ellis QS: A NW, 55° Date 15 July 75

Site Description mixed stand shrub inventory QA Check Rdm 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Cercocarpus montanus	17	5 ? Rdm	12	5	0	1	0	BROWSED BUT VIGOROUS
2 Purshia tridentata	24	5	7	30	17	14	3	" "
3 Juniperus osteosperma	1	2	0	0	0	0	2	— NORMAL
4 Pinyon edulis	2	2	4	0	0	2	1	— "
5 Artemesia tridentata	14	3	0	0	0	0	10	—
6 Opuntia polyacantha	37	4,5	0	0	0	0	3	—
7								
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Cemo	0.00	0.28	1.10	1.34	4.68	5.01	7.70	8.55	16.55	16.58
Putr	7.12	7.95	14.46	15.00	16.15	16.53	16.79	17.20	17.31	17.36
	0.79	0.82	1.73	2.04	10.53	10.82	3.70	3.85	4.03	4.33
	4.33	5.08								
Artr	12.76	13.14								
[illegible]	13.46	13.48	13.89	14.31						

83C.22.5-100

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type PINYON-JUNIPER Transect # #17 Type Non-Perm

T 2S R 99W S 2 1/4 1/4 S NENW Transect Length 100m

Aspect (degrees) 300° Slope (degrees) 11° / 0S: 18° Elevation (feet) 6920'

Field Analyst(s) Ellis, Harding Date 15 Jul. 75

Site Description mature, [illegible], sparse understory QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juos	1	5 2,	3	1	1	3	1	GALLS
2 Pied	2	5 1	2	4	2	2	5	normal
3								
4								
5								

Species	Intercepts (m) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
Juos	4.10	6.25	6.67	7.52	6.29	7.21	7.65	9.17	Q1: 45, 17, 25
	13.60	14.95	6.68	7.57					Q2: 55,
									Q3: 26,
									Q4: 11, 25, 26
									Q5: 35,
Pied	7.05	14.33	1.70	6.95	11.20	15.34	4.01	7.78	Q1: 55, 30,
	14.60	15.65	17.20	18.95	7.75	8.84	8.84	13.40	Q2: 38, 27, 50, 20,
	16.40	20.00,							Q3: 24, 28,
									Q4: 12, 15,
									Q5: 13, 20, 16, 36, 39

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83C2.2.5-101

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon - Juniper
Non-Permanent Transect # 17
T 2S R 99W S 2 1/4 1/4 S NENW
Transect Length 100 m
Aspect (degrees) 300/010
Slope (degrees) 11° / QS: 18°
Elevation (feet) 6920
Field Analyst(s) Ellis, Harrows
Date 15 July 75
Site Description mature mixed stand - sparse understory
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Cemo	17	5 ? Rom	1	0	0	2	0	browsed mor
2 Purshia tr	24	5	1	2	13	1	0	browsed
3 Avtr	14	3	0	1	2	3	0	normal
4 Pied	2	2	0	0	2	2	11	↓
5 Syor	33	2	0	0	0	2	0	↓
6 Ammut	32	5	0	0	0	1	12	browsed
7 Oppo	37	4,5	0	0	0	2	0	normal
8 Juos	1	2	0	0	0	0	1	↓
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Cemo	0.00	0.50								
Avtr	7.06	7.17								
Putr	16.79	17.78	17.92	18.48						
Pied	4.22	5.06	10.20	10.33						

836.2.2.5-162

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Pinyon - Juniper   Transect # 18   Type NON-PERM
T 1S   R 99W   S 18   1/4 1/4 S NWNW   Transect Length 100 M
Aspect (degrees) 120   Slope (degrees) 5°   Elevation (feet) 7420
Field Analyst(s) VORISS and HARDING   Date 16 July 75
Site Description MATURE STAND OF P-J PRIMARILY PINYON [illegible]   QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	5 ?	0	2	2	0	0	PORCUPINE CUTTINGS ON PIED
2 Juos	1	5	0	2	1	3	1	Normal
3								
4								ALSO LICHEN IN QUADRAT
5								

see below

Species	Intercepts (m) I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter (cm) of Each Tree
Pied	9.10	9.14	9.61	9.72	16.75	18.55	9.15	16.88	Q1: ZERO
	17.75	20.00	0.00	0.90					Q2: 9.5, 16.5,
									Q3: 52, 25,
									Q4: ZERO
									Q5: ZERO
Juos	15.35	17.85	5.35	8.80	11.16	12.55	14.80	16.80	Q1: ZERO
									Q2: 14.5, 21.5,
									Q3: 25,
									Q4: 10, ~~7.5~~, 13,
									Q5: 9,

too small

8302.2.5-103

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Pinyon-Juniper
Non-Permanent Transect # 18
T 15 R 99W S 18 1/4 1/4 S NW NW
Transect Length 100 meters
Aspect (degrees) 120
Slope (degrees) 5
Elevation (feet) 7420
Field Analyst(s) Vorios and Harding
Date 16 July 75
Site Description Mature stand of P-J primarily Pied many dead
QA Check [illegible] 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artemisia tridentata	14	3 2 com	68	41	29	41	69	2, normal
2 Amelanchier utahensis	32	5	9	9	9	4	10	
3 Pinus edulis	2	2	6	7	6	4	10	
4 Opuntia fragilis	38	4, 5	5	1	0	6	6	
5 Juniperus osteosperma	1	2	1	2	3	7	5	
6 Chrysothamnus nauseosus	19	3	0	0	2	0	0	
7 Symphoricarpos oreophilus	33	4	0	0	1	0	0	
8 Purshia tridentata	24	5	0	0	0	0	1	
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	1.12	1.26	2.32	2.96	3.00	3.15	4.38	4.57	7.02	7.29
	10.28	10.30	14.04	14.17	18.70	18.77	1.28	1.42	3.49	3.70
	4.40	4.59	4.63	4.66	5.68	6.01	8.95	9.05	9.72	9.87
	11.91	12.39	16.92	16.96	17.79	18.34	19.60	19.89	0.48	0.63
	4.11	4.17	7.03	7.28	7.68	7.79	8.20	8.32	1.01	1.16
	1.69	1.82	1.94	2.09	9.89	10.06	12.51	12.62	12.94	12.95
	13.49	13.69	13.84	14.05	15.07	15.30	17.05	17.21	0.19	0.58
	1.56	1.94	2.45	2.57	4.80	5.66	5.65	5.70	5.82	6.10
	6.02	6.93	7.59	7.87	8.10	8.13	8.39	8.42	10.95	11.00
Page 2										
Pied	19.50	19.74	0.20	0.70	3.06	3.32	2.82	2.87		
Amut	2.79	2.82	3.58	3.70	3.78	3.97	15.59	20.00	0.00	0.11
Opfr	11.95	12.20								
Jnos	2.45	0.61	7.13	7.15	1.20	1.67	1.87	[illegible]	2.10	[illegible]

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8352.7.5-104

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

Vegetation Type P-J
Non-Permanent Transect # 18
Date 16 July 75
RBm 7/23

	Intercepts (m)									
Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	11.25	11.43	15.80	15.86	16.30	16.37				
mut	9.35	10.10	10,12	10,16	19.24	20.0.				

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83,C.2.2.5-105

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon Juniper
Transect # 19
Type NON PERM

T 15
R 100 W
S 24
1/4 1/4 S NWNE
Transect Length 100 M

Aspect (degrees) 120
Slope (degrees) 90
Elevation (feet) 7660

Field Analyst(s) Vories and Harding
Date 16 July 75

Site Description ?, RDM
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	5 ?. RDM	3	2	2	3	2	PORCUPINES FEEDING WELL
2								
3								
4								
5								

Species	Intercepts (m) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
Pied	4.70	7.10	6.40	13.75	17.35	20.00	0.00	1.24	Q1: 19, 20, 15
	2.09	6.05	9.70	11.65					Q2: 69, 36
									Q3: 29, 9
									Q4: 23, 33.5, 10
									Q5: 11.5, 15

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83.C.7.2.5-101

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Pinyon-Juniper

Non-Permanent Transect # 19

T 1S R 100W S 24 1/4 1/4 S ~~[illegible]~~ NWNE

Transect Length 100 m

Aspect (degrees) 120

Slope (degrees) 9°

Elevation (feet) 7660

Field Analyst(s) Vories and Harding

Date 16 July 75

Site Description mature stand P-J mostly Pinon [illegible] pinyon. seedlings, tall shrub understory Amut/Cemo

QA Check [illegible] 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artu	14	3 ?, [illegible]	3	0	32	2	17	? [illegible]
2 Amut	32	5	13	21	45	39	66	
3 Syor	33	4	7	46	1	11	59	
4 Pied	2	2	1	1	7	8	20	
5 Cemo	17	5	0	8	56	0	4	
6 Chvi	20	3	0	0	4	3	0	
7 Chna	19	3	0	0	0	0	1	
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artu	0.00	0.37	10.96	11.02	8.11	8.30	2.90	3.36		
Pied	18.34	19.63	0.54	0.60	15.57	16.86				
Cemo	18.30	20.00	0.00	1.10	1.19	1.40	1.73	1.75		
Amut	0.00	0.05	1.62	1.67	2.32	2.35	2.48	2.65	2.65	2.70
	3.12	3.14	3.35	3.50	17.25	18.30	9.87	9.91	10.08	10.45
	10.46	10.82	11.55	11.86	11.87	12.76	13.56	14.33	14.95	15.07
	17.18	17.21	18.05	18.21	18.84	18.99	6.85	7.80	12.89	14.10
	0.56	0.80	1.39	2.02	2.48	3.93	5.12	5.58	5.65	5.80
Syor	17.26	17.50	19.10	19.17	8.68	9.06	9.21	9.25	9.38	9.51
	9.72	9.76	10.20	10.25	10.79	10.96	17.20	17.40	5.90	6.01
	6.33	6.37	8.50	8.60	19.17	19.22	19.50	19.75		
Chvi	15.47	15.50								

83.C.2.7.5 -107

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type P-J

Non-Permanent Transect # 19

Date 16
RDm 7/23

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Amut	7.19	7.28	7.95	8.60	15.48	18.90	19.00	19.84		

83.C.2.2.5.118

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinon-Juniper Transect # 1 (30) Type permanent

T 1S R 99W S 33 1/4 1/4 S SESE Quadrat Size 15 m²

Aspect (degrees) ____ Slope (degrees) ____ Elevation (feet) 7200

Field Analyst(s) Voorhes / Bower Date 20 July 75

Site Description ____ QA Check ____

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Eriogonum lonchol.	172	4			3	2			1	T	2	1	1	T	3	.5	4	2				
Oryzopsis hymenoid.	100	5				1								1		2		T				
Cryptantha seric.	194	2			1	T											1	T				
[illegible] fendler.	267	3					1	1					2	1	3	2	2	1			9	2
Agropyron trachy.	054	2						6		5				T				2		4		8
[illegible]	155	6					1	3							1	2					4	5
[illegible]	198	3																	1	T		
[illegible]	287	6																			2	2

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1S 99W S24 NWNW

83.C.2.2 S-164

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon - Juniper Transect # 2 (21) Date 22 July 75

Shrubs / [illegible] perm.

Quadrat Number

Percent of Total · Each Species

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
[illegible]	052	2		1						4		5		10						4		
Koeleria cristata	010	2		3		3		4		3		3						4		3		4
[illegible]	155	4	2	3	1	1					3	2										
[illegible]	054	2		2		8		5		4		4				T		3				6
[illegible]	100	2		T		2		2				2		4		2				4		
Astrag. [illegible]	297	2	1	1																		
Gutierrezia [illegible]	194	2	1	T	6	1									2	T	6	2	7	3		
[illegible] hoodii	209	2			5	3	2	1	1	T	2	1					7	4	2	2	3	2
Stipa comata	115	2				2																
Erigeron [illegible]	220	2					1	T	1	1	2	1			2	1					1	T
[illegible]	208	2									2	T					1	T				
[illegible]	299	5									4	T	3	1								
[illegible] longifolium Sitanion hystrix	112	5																2				
sandbergii Poa secunda	108	2																				2
[illegible]	175	2																			2	T

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83.C.2.2.5-110

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 85

Sheet 1 of 1

Vegetation Type Pinyon Juniper
Transect # 3(22) Type ~~[illegible]~~ Quadrat
T 25 R 99W S 12 1/4 1/4 S NW/NE Quadrat Size .5 m²
Aspect (degrees) 340 Slope (degrees)
Elevation (feet) 7200
Field Analyst(s) Torres, Baker
Date 20 July 75
Site Description
QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Thysanocarpus filatimus	229	2	1	2					1	1											1	1
[illegible] tonarita	269	4	1	1	2	T	1	T														
[illegible] fenleri	267	4	1	1			1	1							2	1	1	1	4	T	2	1
Agropyron smithii	052	2		1																		
Gutierrezia saroth.	127	2			1	1																
[illegible] thurberi	175	2			1	T											3	T			1	T
[illegible]	288	5			2	T											1	T				
Calochortus nuttallii	155	4					1	1	2	T									1	2		
[illegible] leptophyllum	172	2							1	1	3	2			V	T			3	2		
Agropyron trachych.	054	2								T						1		3				T
Potentilla sericea	194	2											1	T								
[illegible]	290	6															1	2				
Oryzopsis hymenoides	100	6																		T		
Phlox hoodii	209	2																	1	T		

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83.C. 2.2 S -111

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type PWJN- Juniper Transect # 4(23) Type Permanent
T 15 R 99W S 33 1/4 1/4 S SESE Quadrat Size .5m²
Aspect (degrees) 180 Slope (degrees) Elevation (feet) 6920
Field Analyst(s) [illegible] / [illegible] Date 20 July 75
Site Description QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
[illegible] hachi.	054	2		T		T				1		T				[illegible]						1
[illegible] garthii	052	2				T		T														T
[illegible] crenata	115	2				T																
[illegible] nuttal.	128	2			3	2	1	2														
[illegible] hookii	209	2					4	2	2	2	1	T									2	2
[illegible]yzopsis hymenoides	[illegible]20	2						1		2								1		1		
[illegible]ecio multilobatus	251	2					5	1														
[illegible] cedenii	230	2					3	1														
[illegible] seric.	194	2					3	1	3	1	2	T							5	1	25	4
[illegible] multifida	0201	2					1	T														
[illegible]ion hystrix	[illegible]12	6						T												2		2
[illegible]eleria gracilis	090	2								1												
[illegible] acuminata	243	2							2	1												
[illegible] caespitosa	103	2													1	1						
[illegible] [illegible]	181	2																	6	1		
[illegible] [illegible]	295	2																	2	T		

83.C.2.2.5-112

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of

Vegetation Type Pinyon Juniper Transect # 5(34) Type Perm

T [illegible] R 99W S 14 1/4 1/4 S NWSW Quadrat Size .5m²

Aspect (degrees) Slope (degrees) Elevation (feet)

Field Analyst(s) Vories, Ellis, Baker Date 14 July 1975

Site Description QA Check

Quadrat Number

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
Total Percent Cover																						
Percent of Total · Each Species																						
Agropyron inerme ~~trachycaulum~~ ~~sp~~	037	2		6	1	T		T										T		T		T
Poa secunda	108	6		T																		
Phlox hoodii	209	2	1	T	1	T	1	T			2	2	1	T	5	2			1	T		
~~[illegible]~~					~~[illegible]~~	~~T~~																
~~[illegible]~~					~~[illegible]~~	~~T~~																
~~[illegible]~~					~~[illegible]~~	~~T~~																
Haplopappus nuttallii	155	4			1	T	1	T														
[illegible]	173	2			1	T			2	T					1	T						
[illegible] caespitosa	1[illegible]3	2					2	1							1	1						
[illegible] sericea	194	2									2	[illegible]	1	1	1	1			~~[illegible]~~	~~T~~	1	1
[illegible]	127	2									1	1										
Sphaeralcea coccinea	181	6									3	T										
~~[illegible]~~ Lygodesmia juncea	375	2										T										
[illegible]	175	2											1	T					~~[illegible]~~	~~T~~	1	T
Castilleja linariifolia	266	4											1	2								
Stipa comata	115	5														2						
Agropyron smithii	052	4														T						
Sitanion longifolium ~~hystrix~~	112	6														1						

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2S 99W S16 NWNW

83.C.225-113

QUADRAT DATA SHEET

HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon-Juniper Transect # 13 (25) Date 22 July 75

[illegible]

Quadrat Number

Percent of Total · Each Species			1		2		3		4		5		6		7		8		9		10	
Species	Code #	Phenology Code	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Stipa comata	115	7		3		2		4		8		2		4						1		
Trifolium [illegible]	173	2			2	1			2	T	6	1					1	T	1	T		
[illegible] fendl.	156	2			2	T					5	T										
Sphaeral. coccinea	181	6					20	12					13	4								
[illegible] smith.	052	2						1														
[illegible]	160	2						3						T								
Gutierrezia sarothrae	194	7					10	2	2	1	4	2			1	T	1	1				
[illegible]	208	2					1	T														
[illegible]	209	2					2	1														
Poa sandbergii	108	2						1														
[illegible]	100	2								T		5										
[illegible]	054	2												T		1		1				T
[illegible] dijers.	237	6													1	T						
[illegible] glauca	211	2													2	T	1	T			1	1
Poa sandbergii [illegible]	207	2																12		1		10
[illegible] eatonii	230	2															2	T				
Phlox hoodii	209	2															1	T				
[illegible]	090	2																		2		

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T13, R94W, S21, NW/SE

830225-114

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Pinyon - Juniper

[illegible] / [illegible]

Transect # 15 (26)

Permanent

Date 21 July 75

Quadrat Number

Percent of Total · Each Species

Species	Code #	Phenology Code	1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
[illegible]	054	2		2				T				1		1						T		
[illegible]	155	4	1	3					1	2												
Festuca [illegible]	207	2						2								10				12		
Euphorb. fendleri	267	4							8	3												
Cirsium [illegible]	100	2								5		2										
[illegible]	258	2											1	T								
Astrag. [illegible]	292	2											7	1								
Carex [illegible]	160	2												2								
Balsamorhiza [illegible]	063	2													1	2						
[illegible]	230	2													1	1						
Cryptantha [illegible]	194	2																	1	T		
[illegible]	198	3																			4	1

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83.C.2.2.6-11

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Rabbitbrush
Permanent Transect # I

1S R 99W S 33 1/4 1/4 S NE SE
Transect Length 100 m

Aspect (degrees) 100
Slope (percent) 2
Elevation (feet) 6800'

Field Analyst(s) Ellis / Traver
Date 5/30/75

Site Description old field, burned sagebrush stumps
QA Check Olln

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chna	19	2	57	64	95	86	70	normal
2 Save	29	2	1	-				
3 Riau - (sample)	40	2				1		
4 Syor	33	2				1		
5								
6								
7								
8								
9								
10								

Intercepts (cm) M

Species	I_1	I_2	Dia m	I_1	I_2	Dia m	I_1	I_2	Dia m	I_1	I_2	Dia m
Chna	0.0	0.5	1.05 m	2.90	3.30	1.00	6.50	6.70	.70	8.10	[illegible]	.72
	12.95	13.90	1.28	14.30	15.10	.67	16.40	17.0	1.05	19.90	[illegible]	1.15
	.70	1.10	.78	1.94	2.84	.71	3.11	4.39	1.20	5.10	5.25	.40
	5.51	6.04	.80	6.05	6.45	.95	6.51	7.60	1.30	10.35	11.[illegible]	.67
	10.36	10.69	.55	12.[illegible]	[illegible]	.87	15.40	15.50	.92	13.09	13.75	.95
	0.05	0.30	.84	3.73	3.77	.90	6.40	6.80	.70	8.14	9.10	1.0
	3.95	1.50	1.21	10.30	11.10	.70	11.10	[illegible]	.73	12.[illegible]	[illegible]	.65
	13.30	14.30	1.25	15.[illegible]	16.22	1.20	17.41	10.33	1.03	18.42	19.11	.95
	19.[illegible]	19.[illegible]	.75	3.01	3.75	.9[illegible]	4.44	[illegible]	.65	[illegible]	5.[illegible]	.9[illegible]
	5.39	5.69	1.15	5.94	6.08	.75	6.26	6.60	.60	7.45	7.[illegible]	.81
	8.10	8.53	.90	8.70	8.95	1.05	9.34	9.50	1.12	11.10	11.[illegible]	1.00
	12.03	12.42	.75	12.33	12.[illegible]	.72	13.59	14.33	.83	14.33	14.[illegible]	.83
	10.40	15.60	.92	16.30	18.[illegible]	1.40	13.80	19.3[illegible]	.92	0.0	[illegible]	1.15
	1.91	1.99	.55	4.10	5.05	1.10	7.10	8.3[illegible]	1.10	[illegible]	[illegible]	.80
	9.91	10.31	1.05	10.[illegible]	12.12	1.45	13.0	13.[illegible]	.85	14.09	15.6[illegible]	1.25
	15.[illegible]	16.35	.92	16.30	16.72	1.5	19.09	19.34	.90			

ECI

R.V.

QUADRAT DATA SHEET 93.C.2.2.U-12
HERBACEOUS STRATUM

Project 33

Sheet 1 of 1

Vegetation Type Rabbitbrush Transect # 1 Type PERMANENT

T 15 R 99W S 33 1/4 1/4 S NESE Quadrat Size .5

Aspect (degrees) 100 Slope (percent) 2% Elevation (feet) 6800'

Field Analyst(s) ELLIS - TURNER Date 30 May 75

Site Description Old field, evidence of burning. QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species		N/A										
Species	Code #	Phenology Code										
Elymus cinereus	200	2	10	13	7	9	4	30	6	50	4	
* Sisymbrium linifolium K.V.	3186	3,4,5	2	1		1	3	T	0.5	T		T
Bromus tectorum	67	3,4	T	2	3	1	4		2			7
Chorispora tenella	252	3,4		T								
[illegible]	147	2			1			1			2	
Taraxacum officinale	203	2			T							
Collinsia ~~sp.~~ parviflora K.V.	219 216	3			T							

*- Sample Collected

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83, C, 2, 2, 6-13

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Rabbitbrush
Permanent Transect # 2
1S R 99W S 35 1/4 1/4 S SE/NW
Transect Length 100m.
Aspect (degrees) 195°
Slope (percent) 1%
Elevation (feet) 6600'
Field Analyst(s) Koehler Kestrel
Date 6/11/75
Site Description alluvial site ~ 300 yds wide
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chna	19	2	24	32	19	54	52	good
2 Chvi	20	2	8	12	9	4		good
3								
4								
5								
6								
7								
8								
9								
10								

Intercepts (cm) M

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Chna	1.08	1.34	.17	2.50	3.21	.43	4.75	4.96	.23	5.70	5.94	.35
	8.54	8.60	.11	8.90	9.40	.34	9.84	10.60	.67	10.84	11.16	.27
	12.71	12.21	.19	1.91	2.33	.36	9.04	9.37	.39	15.17	15.36	[illegible]
	0.40	0.74	.48	4.75	5.64	.90	4.88	8.84	.63	8.05	8.84	.93
	12.02	12.08	.44	12.06	12.50	.41	14.84	15.35	.27	18.92	18.99	.79
	1.20	6.26	.57	9.20	9.34	.19	10.18	10.37	.21			
Chvi	7.70	7.85	.17	8.48	8.60	.35	0.96	1.26	.27	17.47	17.93	.46

83.C.2.2.6-14

QUADRAT DATA SHEET

HERBACEOUS STRATUM

SESA

Project 83

Sheet 1 of 1

Vegetation Type Rabbitbrush
Transect # 2
Date 6/1/75

quadrat

Quadrat Number

Percent of Total · Each Species			1	2	3	4	5	6	7	8	9	10
			NA									
Species	Code #	Phenology Code										
[illegible] Tact [illegible]	203	2	T									
unknown mustard	253	3	T	T				T		T	T	T
Elymus [illegible]	200	2	10.	18.	25.	30.	65.	35.	35.	T	28.	22.
Poa spp.	175	2	15.	1.			2.		2.	6.	.5	T
[illegible]	52	2	T	1.							T	
[illegible]	219	3		T								
[illegible] racutus [illegible]	(111)	2		T					T	1.5		
Poa [illegible]	107	2+3				20.	T	1.5	T	T		
Bromus? sp	163	2								3.		25.
Penstemon sp	102	2									T	

83.6.2.2.6-15

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Rabbitbrush   Non-Permanent Transect # 3

T 15   R 93W   S 3   1/4 1/4 S SE/NE   Transect Length 100 m

Aspect (degrees) 92°   Slope (percent) 3° 5%   Elevation (feet) 6230

Field Analyst(s) Turner/Back   Date 6/17-75

Site Description disturbed site ([illegible])   QA Check D/MW

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 China	19	2	253	247	276	290	29[illegible]	[illegible]
2 Orhy	14	2	24	26	13	103	110	[illegible]
3 Save	29	2	1	4	20	32	27	[illegible]
4								
5								
6								
7								
8								
9								
10								

Intercepts ~~(cm)~~ M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
China	3.55	3.72	3.75	4.10	[illegible]	[illegible]	5.35	5.70	6.15	[illegible]
	6.90	7.23	7.70	[illegible]	7.85	8.85	9.00	9.11	9.5[illegible]	[illegible]
	10.21	10.31	11.12	11.30	12.40	13.25	13.75	13.80	15.95	[illegible]
	18.03	18.05	18.47	18.58	19.95	20.05	0.22	0.31	1.54	1.62
	4.92	5.15	5.25	5.34	6.02	7.35	8.10	8.26	[illegible]	[illegible]
	9.25	9.50	9.92	10.26	10.75	11.25	[illegible]	14.72	14.75	[illegible]
	15.28	15.30	17.53	17.36	17.72	17.8[illegible]	19.85	20.05	1.70	[illegible]
	2.43	2.56	6.02	6.30	7.33	7.44	9.44	9.66	10.12	[illegible]
	10.71	10.90	11.32	11.39	11.39	11.45	11.52	11.62	11.62	12
	13.54	13.52	16.30	16.45	16.50	16.82	17.53	17.95	19.30	[illegible]
	0.23	1.10	1.88	2.12	2.42	2.70	2.94	3.10	3.33	[illegible]
	4.50	4.55	5.10	5.22	5.32	5.40	6.69	7.38	8.34	[illegible]
	6.04	[illegible]	6.18	6.25	6.34	[illegible]	6.57	6.75	6.71	[illegible]
	7.10	7.31	7.40	7.63	7.70	7.82	7.90	8.07	CONT	→
Save	14.20	14.46	0.22	0.33	3.61	4.11	10.25	10.60	CONT	→
	12.13	12.2[illegible]	17.78	17.83	18.30	18.88	4.23	4.30	12.38	12.41
[illegible]	10.45	10.52	7.50	7.64	7.72	8.03	4.70	4.92		

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83.6.2.2.6-15

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Rabbitbrush
Non-Permanent Transect # 3
T 15 R 93W S 3 1/4 1/4 S SE / NE
Transect Length 100 m
Aspect (degrees) 92°
Slope (percent) 3° 5%
Elevation (feet) 6230
Field Analyst(s) Turner / Jack
Date 3/17/75
Site Description disturbed site (sagebrush)
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chna	19	2	253	24	274	290	29[illegible]	[illegible]
2 Oryz	14	2	24	26	13	10	10	[illegible]
3 Save	29	2	1	4	20	32	27	[illegible]
4								
5								
6								
7								
8								
9								
10								

Intercepts ~~(cm)~~ M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Chna	3.55	3.72	3.75	4.10	[illegible]	4.61	5.35	5.70	6.15	[illegible]
	6.90	7.23	7.40	[illegible]	7.85	8.81	9.00	9.11	9.5	[illegible]
	10.20	10.31	11.12	11.32	12.40	13.05	13.75	13.30	15.99	[illegible]
	18.03	18.0	18.43	18.53	19.95	20.00	0.22	0.31	1.54	[illegible]
	4.72	5.15	5.25	5.34	6.02	7.35	8.12	8.26	[illegible]	[illegible]
	9.25	9.50	9.90	10.26	10.75	11.25	[illegible]	14.72	14.75	[illegible]
	15.23	15.30	17.53	17.80	17.72	17.8	19.38	20.05	1.70	[illegible]
	2.33	2.56	6.02	6.30	7.33	7.44	9.44	9.65	10.12	[illegible]
	10.71	10.90	11.02	11.09	11.39	11.45	11.52	11.62	11.62	[illegible]
	13.39	13.52	16.30	16.45	16.70	16.82	17.53	17.95	19.30	[illegible]
	0.23	1.10	1.88	2.12	2.42	2.70	2.94	3.10	3.33	[illegible]
	4.50	4.65	5.10	5.22	[illegible]	[illegible]	6.60	[illegible]	6.34	6.0
	6.04	[illegible]	[illegible]	[illegible]	6.37	[illegible]	[illegible]	6.15	6.71	[illegible]
	7.10	7.31	7.40	7.63	[illegible]	7.60	[illegible]	8.07	CONT	→
Save	14.20	14.66	2.22	0.53	3.61	4.10	10.25	10.60	CONT	→
	12.10	12.2	17.78	[illegible]	13.30	13.38	4.23	4.30	12.38	12.41
[illegible]	10.45	10.52	3.50	3.64	3.72	3.83	4.70	4.92		

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83.C.2.2.6-16

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 37
Sheet 2 of 2

Vegetation Type Rabbitbrush
Non-Permanent Transect # 3
Date 6/1/75

Intercepts ~~(cm)~~ M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Chna	8.00	8.43	8.44	8.92	9.03	9.05	9.11	9.75	10.09	10.3
	10.33	10.45	10.79	10.87	12.53	12.65	13.33	13.54	14.25	[illegible]
	14.72	15.49	16.11	16.51	17.50	17.61	17.74	17.81	18.73	18.
	18.93	19.10	19.19	19.21	19.5	[illegible]	0.48	0.62	0.75	1.00
	1.12	1.25	1.29	1.31	1.40	2.00	2.03	2.04	2.20	[illegible]
	2.75	2.84	2.99	3.03	3.41	3.44	3.51	3.80	5.64	[illegible]
	5.19	5.40	6.28	6.40	6.46	6.65	7.11	7.15	7.30	[illegible]
	7.33	7.42	7.52	7.62	8.09	8.14	8.27	8.36	8.50	[illegible]
	9.34	9.55	9.60	9.76	10.11	10.20	10.33	10.40	10.77	[illegible]
	11.47	11.60	14.48	14.70	15.50	15.54	15.91	16.02	16.37	[illegible]
	19.54	19.76								
[illegible]	11.95	12.60	16.85	17.48						

83.6.2.2.6-17

.8 mi East of.
Stakes Spring gate
down Stakes Spring gulch

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

ion Type Rabbitbrush Non-Permanent Transect # 4

2S R 99W S 11 1/4 1/4 S SESE Transect Length 100m

ect (degrees) 162° Slope (percent) 3% Elevation (feet) 6600'

ld Analyst(s) Voris Koehler, Kastel Date 6/2/75

e Description successional [illegible] has been burned QA Check OAB

[illegible]

cies	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
Sarcobatus vermiculatus	29	2	31	4	4			normal
rysothamnus nauseosus	19	2	162	101	116	179	231	normal
Art. tridentata	14	2	54	153	196	366	899	galls

Intercepts (cm) M

ecies	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
. nauseosus	1.05	1.20	5.01	5.74	6.34	6.55	6.59	7.18	7.94	8.22
	9.95	9.96	9.50	10.05	10.05	10.37	10.56	10.60	10.70	10.71
	11.40	11.44	11.45	11.82	12.12	12.18	12.63	12.95	13.15	13.95
	14.16	15.54	15.71	15.90	15.92	16.20	16.25	16.95	17.14	17.56
	17.62	17.65	17.99	18.39	18.50	19.10	19.58	19.99	19.60	19.74
	0.12	0.22	3.20	3.43	5.35	5.84	7.45	7.70	8.36	8.40
	9.85	10.21	12.42	12.68	13.70	14.10	14.40	15.36	17.14	18.39
	0.05	0.27	4.36	4.54	4.97	5.46	7.54	8.00	9.05	9.87
	9.95	10.30	12.00	12.12	14.26	14.35	15.52	15.93	16.50	17.04
	17.34	17.50	18.96	18.97	19.18	19.34	0.29	1.10	1.40	1.90
	3.14	3.70	4.50	4.94	5.72	5.90	6.10	6.50	7.42	8.31
	8.31	8.81	9.06	9.32	9.75	10.32	10.09	11.04	11.29	11.50
[illegible]	1.25	1.98	2.45	2.60	3.40	4.04	8.23	8.43	12.14	12.40
	5.50	6.05								

ECI

83.6.2.2.6-18

T 25 R 99W S 14 NWSW

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

Vegetation Type Rabbit brush
Non-Permanent Transect # 4
Date 6/2/75

Intercepts (cm) M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Art. tridentata	4.10	4.32	12.15	12.20	3.10	3.19	3.30	3.84	3.78	3.84
	3.85	3.92	5.10	5.19	7.40	7.49	7.60	7.63	7.64	7.67
	7.70	7.78	10.48	10.52	10.65	10.68	11.70	11.83	12.70	12.85
	16.48	16.54	17.15	17.29	17.69	17.90	19.76	19.79	0.40	0.46
	1.95	2.11	2.49	2.69	3.05	3.32	3.42	4.16	4.83	4.89
	6.08	6.15	10.23	10.68	11.19	11.21	12.10	12.62	12.66	13.5
	7.01	7.06	7.30	7.35	7.30	7.62	7.66	7.68	9.40	9.84
Chry. nause (cont)	11.54	12.42	13.70	13.76	14.09	15.19	15.30	16.54	16.53	16.8
	17.18	17.68	17.84	17.99	18.21	19.24	19.08	19.65	19.73	20.5
	0.90	1.00	1.35	1.46	1.54	1.64	1.75	2.17	2.18	2.28
	2.40	2.44	2.60	2.68	3.14	3.23	4.09	4.60	4.73	5.10
	5.15	5.58	5.70	5.94	7.71	8.90	9.93	9.80	10.52	11.23
	11.24	11.49	11.57	12.36	12.73	12.95	13.10	13.15	13.33	13.98
	14.02	14.98	15.60	15.92	15.96	16.22	16.51	16.90	17.08	17.29
	17.95	18.40	18.50	19.85						

83.C.2.2.6-19

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

etation Type Rabbitbrush

Non-Permanent Transect # 5

T 2S R 99W S 12 1/4 1/4 S NESW

Transect Length 100m

Aspect (degrees) 50°

Slope (degrees) 2°

Elevation (feet) 6500'

Field Analyst(s) Ellis, Baker

Date 17 July 75

Site Description [illegible]

QA Check RGM 7/-3

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chrysothamnus viscidiflorus	20	3?	18	53	41	28	41	? [illegible]
2 Artemisia tridentata	14	3	8	1	15	5	[illegible]	↓
3 Chry. nauseosus	19	3	1	1	0	2	[illegible]	↓
4								
5								
6								
7								
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Chryso visid	0	.417	[illegible]	[illegible]	[illegible]	[illegible]	1.45	9.62	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	11.50	15.43	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	2.50	2.20	2.21	[illegible]	[illegible]	[illegible]	3.90
	[illegible]	5.37	[illegible]	[illegible]	11.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	7.14	[illegible]	.20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.60
	8.00	[illegible]	[illegible]	9.20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	9.9	[illegible]	[illegible]	[illegible]	[illegible]	17.21
[illegible] aus	[illegible]	[illegible]	16.17	16.23	[illegible]	[illegible]	.96	9.37	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]							

2S 99W. S12
NESW

83.C.2.2.6-28

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

'egetation Type Rabbitbrush

Non-Permanent
Transect # 5

Date 17-2-6-75
RPM 7/23

Intercepts (m)

pecies	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
hrysothamnus	0	1.17	2.21	2.57	4.35	4.73	5.85	6.07	6.82	7.71
iscidiflorus	7.52	8.52	9.54	11.15	11.39	11.56	12.12	14.71	15.63	15.85
	16.54	17.22								

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83.C.2.2.6-21

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Rabbit brush Transect # 16 Type Permanent

T 15 R 90W S 33 1/4 1/4 S NESE Quadrat Size .5 m^2

Aspect (degrees) 100 Slope (degrees) Elevation (feet) 6800

Field Analyst(s) NORRIS / BAKER Date 20 July 75

Site Description QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Elymus cinereus	200	5		12		40		26		40		20		50		40		70		5		3
Chenopodium fremont	198	2									5	T			1	T	2	1	2	1	2	1
Artemisia ludovic.	147	2											2	2					2	3		
Descurainia pin.	205	7																	4	T		

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83C.2.2.6-22

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Rabbit brush
Transect # 2(7) Type Permanent
15 R 99W S 36 1/4 1/4 S SENW Quadrat Size .5m²
Aspect (degrees) 145 Slope (degrees)
Elevation (feet) 6800
Field Analyst(s) Voigt, Baer
Date 20 July
Site Description
QA Check

			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
lymus ciner.	200	5		35		15		50		60		95		70		45		2				60
yron smith	052	5		6		10		2				T		2								
a pratensis	107	5		3		1		4		25		2		3		10		20				10
[illegible]	203	2	1	T																		
ach. bettiae	306	5														4		10				
[illegible]	205	5																		20		
[illegible]	377	2																			4	2

83.C.2.2.7-6

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Riparian   Transect # 1   Type Perm.
2S   R 99W   S 14   1/4 1/4 S SE NW   Quadrat Size 100m
Aspect (degrees) 12°   Slope (percent) 1%   Elevation (feet) 6700
Field Analyst(s) Vories, Koehler, Keckel   Date 6/2/75
Site Description wet meadow, heavily grazed,   QA Check JAS

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species NA			—	—	—	—	—	—	—	—	—	>
Species	Code #	Phenology Code										
Agropyron caninum? ~~Bromus inermus~~	149	2	37.	95.	99.	99.		97.5	98.		75.	15.
unknown 24 (R1 .5)		2	60.				1.5		1.		6.	40.
Bromus inermis ~~sp.~~	149 K.V. ~~153~~	2	3.									
Taraxacum officionale ~~sp.~~ K.V.	203, ~~148~~	2		T					T			
Erigeron eatonii	230	2								T		
Juncus balticus ~~sp.~~ K.V.	306 ~~231~~	2										10

LINE-STRIP METHOD 83.C.2.2.7-7
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Riparian
OFF TRACT Permanent Transect # 2
1S R 98W S 30 1/4 1/4 S NE SW Transect Length 100 m
Aspect (degrees) 15° Slope (percent) 2% Elevation (feet) 6350
Field Analyst(s) Koehler Vories Koehl Date 6/3/75
Site Description old pasture adjacent to stream bank invaded by Artr. tridentata, composed primarily of introduced grasses & [illegible] QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chrys. nauseosus	19	2			2	3	2	old, [illegible]
2								Br. inermis
3								
4								
5								
6								
7								
8								
9								
10								

Intercepts (~~cm~~) m

Species	I_1	I_2	Dia (m)	I_1	I_2	Dia (m)	I_1	I_2	Dia (m)	I_1	I_2	Dia
Chrys. nauseosus	3.40	3.67	.27									

1

QUADRAT DATA SHEET 83.6.2.2.7-8
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Riparian Transect # 2 Type P[illegible]

15 R 98W S 30 1/4 1/4 S NESW Quadrat Size ~~10 m.~~ .5m²

Aspect (degrees) 15° Slope (percent) 2% Elevation (feet) 6350

Field Analyst(s) Kuttler, Varies, Kestrel Date 6/3/75

Site Description old pasture adjacent to stream bank QA Check

invaded by Art. Tridentata, composed primarily of [illegible] grasses & [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		NA										
Percent of Total · Each Species												
Species	Code #	Phenology Code										
[illegible] Bromus inermis	149	2	45	70.	50.	35.	80.	25.	12.	65.	8.	5.
Chenopodium fremontii	198	2	T			1.					T	
Taraxacum ~~sp.~~ officinale K.V.	283 ~~178~~	2			1.	3.	T	1.				2.
Descurainia ~~sp.~~ pinnata K.V.	73	2					T		T			
Carex sp.	68	2							15.			35.
~~[illegible] sp.~~ [illegible] linifolium K.V.	~~232~~ 316	3								1.		
Poa pratensis	107	2									2.	
Juncus balticus K.V.	~~931~~ 306	2										5.
unknown 1 voucher # 135 R2.1	233	2										1.

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LINE-STRIP METHOD 83.6.2.27-9
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Riparian
Permanent Transect # 3
15 R 98W S 30 1/4 1/4 S NWSE
Transect Length 100 m
Aspect (degrees) 15°
Slope (percent) 1%
Elevation (feet) 6350
Field Analyst(s) Vance Kreiter Keistad
Date 6/3/75
Site Description Old Pasture, adjacent to stream; [illegible] by Arte. tridentata, [illegible] primarily of introduced grasses; [illegible]
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chry. nauseosus	19	2		15	17	20	14	normal
2 Sarco. vermiculatus	29	2		1		10		normal
3								
4								
5								
6								
7								
8								
9								
10								

Intercepts (cm) M

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Chrysothamnus nauseosus	16.82	17.21	.24	4.92	5.05	.17	6.29	6.31	.10	6.44	6.51	.27
	9.06	9.18	.49	5.55	5.98	.45						

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QUADRAT DATA SHEET 83.C:2.2.7-10
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Riparian
Transect # 3
Type Perm.
15
R 98W
S 30
1/4 1/4 S NWSE
Quadrat Size 100 m
Aspect (degrees) 15°
Slope (percent) 1%
Elevation (feet) 6350
Field Analyst(s) Koehler Varies Kestrel
Date 6/3/75
Site Description Old pasture adjacent to stream, [illegible] reinvaded by Art. tridentata, composed primarily of introduced grasses + cosmo. annuals.
QA Check [illegible]

			Quadrat Number										
			1	2	3	~~4~~	4	5	6	7	9	9	10
Total Percent Cover		NA											
Percent of Total · Each Species													
Species	Code #	Phenology Code											
Danthonia sp.	73	2	T	T	2.				5.	T		T	5
[illegible] ~~Bromus [illegible]~~	149	2	70.	60.	35.		65.	55.	20.	25.	20.	50.	
unknown #1 voucher # 46 R3-1	234	2		20.							T		
Poa pratensis	107	2			6.		3.	5.	2.	5.			S.
Chenopodium [illegible]	198	2			T				T			T	
		~~2~~											
Taraxacum officinale ~~sp.~~ K.V	~~148~~ 203	3					.5		2.	10.			
Lactuca serriola ~~sp.~~ K.V	~~235~~ 259	2					.5						
unknown #2	236	2								T			
Ranunculus cymbalaria ~~sp.~~ K.V.	~~140~~ 307	2									T		
Carex sp.	68	2									15.		
Juncus balticus K.V.	~~231~~ 306	2									1		
Chenopodium fremontii ~~[illegible]~~ K.V.	~~[illegible]~~ 118	2											T

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LINE-STRIP DATA SHEET 83.C.2.2.7-11

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Riparian

Non-Permanent Transect # 4

T 2S R 99W S 6 1/4 1/4 S SWNE

Transect Length 100m

Aspect (degrees) 91°

Slope degrees ~~(percent)~~ 5° 9%

Elevation (feet) 7100

Field Analyst(s) Koehler, Vorra, Kestrel

Date 6/4/75

Site Description Bottom of stream, heavily grazed by horses

QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 [illegible]	R4.1 33	2	2	74	54	87	47	[illegible]
.2 2 [illegible] aureum	R4.2 40	3	2	2	18	9	15	[illegible]
3 Art. tridentata	R4.3 14	2	74	24	12	15	22	[illegible]
4 [illegible]	R4.4 19	2	14	2	7	4	12	[illegible]
5 [illegible] woodsii	R4.5 41	2		37	14	36	75	|
4.6 6 [illegible]	R4.6 32	3			4	7		|
7 Prunus virginiana	R4.7 23	2			2	43	7	↓
8								
9	NA-SLE							

Intercepts ~~(cm)~~ m

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
[illegible]	0.94	1.98	19.83	20.27	3.77	3.85	4.67	5.32	6.45	[illegible]
oreophilus	11.65	11.78	19.75	19.89	0.32	0.61	1.97	2.15	2.44	[illegible]
	3.12	3.18	3.98	4.14	6.06	[illegible]	1.84	2.02	3.41	3.57
[illegible]	18.78	19.10	3.28	4.57	11.40	11.65	3.96	4.08	2.40	[illegible]
	17.85	18.21	9.65	10.19						
Art. tridentata	1.97	2.82	8.32	8.42	8.98	9.05	9.26	9.35	3.98	4.07
	5.33	5.78	6.04	6.36	8.40	9.99	9.40	9.62	1.23	1.54
	8.82	9.09	[illegible]	9.10						
[illegible] aureum	3.16	7.52	8.07	8.31	12.74	13.[illegible]	13.67	15.75		

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LINE-STRIP DATA SHEET 83.C.2.2.7-13

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type "RIPARIAN"

Non-Permanent Transect # #5

T 25 R 90W S 8 1/4 1/4 S SWSW

Transect Length 100 m

Aspect (degrees) 65°

Slope (percent) Acc #3 19° 24%)

Elevation (feet) 7000'

Field Analyst(s) Ellis/Jones

Date 5 June 75

Site Description Stream, [illegible] gradient, [illegible], many rocks

QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Art tridentata	14	2	49	21	18	89	55	
2 Chrysothamnus nauseosus	19	2	19	14	43	1	7	
3 Symphoricarpos oreophilus	33	2	1			2	2	
4 Ribes [illegible]	40	2,4					6	
5 Ribes cereum	42						6	
6 Rosa woodsii K.V.	041 ~~78~~						5	
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Chry. nauseosus	[illegible]	2.71	2.32	3.2	14.40	15.01	17.20	17.40	17.35	[illegible]
	15.70	15.80								
Symp. oreophilus	12.65	13.00								
Artemisia	3.46	3.65	4.31	5.70*	13.00	13.17	3.73	3.91	5.10	5.15
tridentata	6.12	6.29	10.25	10.41	16.23	16.32	16.49	17.01	13.00	13.2
	18.5	19.0	2.15	2.51	5.13	5.21	3.65	4.01	9.32	[illegible]
	5.41	5.63	6.10	7.15	8.00	9.12	13.6	16.00	16.00	16.5
	17.3	18.6	18.9	19.35	19.72	20.00				

Slum = 7.20, 12.80

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LINE STRIP DATA SHEET 83.C.2.2.7-12
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

Vegetation Type Pinyon
T2S R99W S6 SW/NE
Non-Permanent Transect # 4
Date 6/4/75

Intercepts ~~(cm)~~ M

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Amel. utahensis	4.31	4.36	7.10	7.38	11.43	11.73	18.60	19.84	19.58	20.2
	0.02	0.70								
Prunus virginiana	11.88	12.22	12.95	13.12	13.68	13.99	14.40	14.72	15.75	17.2
Rosa	16.02	18.07	18.49	18.52	2.10	2.87	3.94	5.74	6.60	6.63
woodsii	7.10	7.41	7.86	8.79	8.90	9.65				

83.C.2.2.7-14

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Riparian Transect # 5 Type Non-P[illegible]

2S R 99W S 8 1/4 1/4 S SWSW Quadrat Size .5m²

Aspect (degrees) 65 Slope (deg ~~percent~~) 14° Elevation (feet) 7000

Field Analyst(s) Ellis/Voris Date 5 Jun 75

Site Description QA Check

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species NA			—	—	—	—	—	—	—			—
Species	Code #	Phenology Code										
Achillea Lanulosa	50	2	8						1			
Tarax offic	203	3	10	T		3		T	15	15	4	2
Desc pinnata	255	3	1				2		T			
Bromus tect.	67	4	1		1				4	2		T
Poa prat.	107	4	12	6	2	3	8	20	15	6	25	
Elymus cineris	200	2	20									
Arte ludoviciana	147	2		15	9	4	5	5	1	T	5	1
Art dracunculus	257	2			8							1
Art frigida	186	2			T	T						
Chaen. douglasii	258	2			2				1	T		
Physaria flori.	175	4			T							
Lactuca seriola	159	2					10					

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Betula ~10 min

83.C.2.2.7-15

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet ~~5~~ 1 of ~~3~~ 2

Vegetation Type Riparian
Non-Permanent Transect # 6
T 15 R 99W S 19 1/4 1/4 S SWSW
Transect Length 100m.
Aspect (degrees) 180°
Slope (degrees) 5°
Elevation (feet) 7180'
Field Analyst(s) Ellis Baker
Date 17 July 75
Site Description Seepage along gully - Cottonwood, Betula
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Salix lutea sp.	45	2	76	[illegible]	[illegible]	15	6	normal
2 Rosa woodsii	41	4,5	7	[illegible]	18	6	8	
3 Art. tridentata	14	3	3	1	[illegible]	3	4	
4 Ribes aureum	40	5	3	[illegible]	2	1	24	
5 Ribes inerme	44	5	5	[illegible]		0	6	
6 Chry. nauseosus	19	3	7	[illegible]	3	1	2	
7 Symp. oreophilus	33	5	8	11	[illegible]	3	4	↓
8 [illegible] occidentalis	46	5	[illegible]	3	3	2	2	some [illegible]
9 Amelanchier utahensis	32	5	[illegible]	[illegible]	[illegible]	[illegible]	2	normal
10 Prunus virginiana	23	5					1	↓

Intercepts (m) we should get some sort of [illegible] thin dark marking device which will hold up under & survive field [illegible]

Species 4-letter code from 2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Salix sp.	0.58	[illegible]	[illegible]	[illegible]	2.42	[illegible]	[illegible]	2.52	[illegible]	[illegible]
	[illegible]	4.81	5.04	[illegible]	[illegible]	[illegible]	[illegible]	4.10	[illegible]	[illegible]
	7.72	8.02	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
	10.75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14.57	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	2.20	[illegible]	3.70	4.05	4.02	4.50	1.50	2.85
	3.20	4.00	17.40	19.20	7.65	8.23	9.45	10.60	10.62	10.90
	11.02	11.63	—	—						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						

15 99W S19 — LINE STRIP DATA SHEET — 85. 16

SWSW — SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Riparian

Non-Permanent Transect # 6

Date 17.[illegible].1975

RDM 7/23

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
					Intercepts (m)					
Betula occidentalis	17.50	19.00	8.60	9.80	12.80	20.0	17.12	17.74	13.60	14.12
Symphoricarpos oreophilus	5.55	5.60	5.83	5.97	14.12	14.34				
Rosa woodsi	[illegible]	[illegible]	6.46	6.53	6.92	7.19	11.25	11.40	12.02	12.20
	15.43	16.05								
[illegible]	11.75	12.40	[illegible]	[illegible]	6.80	7.87	8.49	9.52	11.12	11.35
	11.95	12.82	13.26	13.45	13.52	13.90	14.70	15.32	15.40	15.49
	16.80	17.15								
Chryso. naus.	12.05	12.10								
Ribes inerme	12.82	13.22	19.20	20.0						
Prunus virgin.	19.30	20.0								

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83.C.2.2.0 + 017

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 18 of 31

Vegetation Type Riparian

Transect # 6

Type non perm

T 15 R 79W S 19 1/4 1/4 S SWSW

Quadrat Size .5m²

Aspect (degrees) 180

Slope (degrees) 8°

Elevation (feet) 7180'

Field Analyst(s) Ellis - Baker

Date 17 July 75

Site Description Seep [illegible] gully

QA Check RMM 7/23

will these xerox legibly? RM

unknowns should be filled in

does form need re-design? RM

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species			NA →																			
Species	Code #	Phenology Code																				
Agropyron sp.	371	5		1																		
Bromus [illegible]	054	4,5		T				1								1						5
[illegible]	127	2	1	1																		
Ranunculus cymbalaria	307	4,5	5	1	8	1																
Taraxacum officinale	203	2	1	1							1	T			1	1				no cover		
Poa pratensis	107	4,5	~~1~~	T	1 →					T						1		1				1
Achillea lanulosa	050	2	3	T	3	1	4	1														
Unk #1 Pbl.	372	2			1	T																
Geranium richardsonii	84	2	4	[illegible]			3	2														
Avenae? Pb.	373	4,5						T														
Calamagrostis sp.	367	4.5											1									
Solidago sp.	130	2													1	10						
Unk. #2 Pbl	374	3													1	5						
Smilacina stellata	297	5,6																			15	30

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83.C.2.2-7-18

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type RIPARIAN Non-Permanent Transect # 7

T 15 R 100W S 25 1/4 1/4 S SE NE Transect Length 100 M.

Aspect (degrees) 75° Slope (degrees) 5° Elevation (feet) 7300'

Field Analyst(s) Ellis Date 17 July 75

Site Description 22, OR QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Ribes inerme	44	→ 5	2	7	—	3	—	normal
2 Ribes aureum	40	5	3	—	2	4	—	|
3 Sior	33	2	1	—	—	5	13	|
4 Rosa woodsii	41	2,3,4	—	6	7	3	1	|
5 Artr	14	2	—	3	—	—	2	|
6 Chna	19	2	—	2	-	—	—	↓
7 Salix sp interior	45	2	—	—	3	14	3	browse heavily
8 Cornus stolonifera	47	5,6	—	—	1	—	1	normal
9 Ribes cereum	42	6-berries	—	—	—	2	2	|
10 Amut	32	6-berries	—	—	-	2	—	↓

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Ribes aureum	16.20	16.30	6.83	7.30	7.93	9.20				
Rosa woodsii	4.90	6.72	7.85	8.50	9.30	9.60	3.90	4.10	4.33	7.40
	15.53	15.70	15.90	16.0						
us stolonifera	9.55	9.95	13.90	14.83						
ior	19.20	20.0	4.40	6.83	9.50	11.45				
lix sp	19.0	19.25	3.78	5.0	4.73	5.0	5.45	6.70		
Chna	17.70	18.55								
ibes cereum	12.05	12.45								

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8362.2.7.19

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of ~~3~~ 1

Vegetation Type Riparian Transect # 7 Type Non Perm

1S R 100W S 25 1/4 1/4 S SENE Quadrat Size .5 m²

Aspect (degrees) 75° Slope (degrees) 5° Elevation (feet) 7200'

Field Analyst(s) Ellis Date 17 July '75

Site Description Spring coming from shale cliffs, Aspect N facing QA Check RDM 7/23

transect paralleling stream Slope, Aspect S-facing Slope

Quadrat Number

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
Total Percent Cover																						
Percent of Total · Each Species																						
Poa pratensis	107	heads maturing		95		80						5		20				1		80		10
Taraxacum officinale	203	2	24	5	30	8					16	5	3	5			2	T				
Cirsium sp.	138	2	1	T																		
Juncus sp. #1 R7.1	365	4,5		T		1																
Agropyron sp. #1 R7.2	366	4,5				4																
Ranunculus cymbalaria	307	4,5					3	1														
Catabrosa sp.	367	5						1			10			50	ROCK		Rock					
Grass #1 R7.3	368	4,5						1		1												
[illegible] #1 R7.4	369	3							10	T												
Agropyron sp. #2 R7.5	370	5 head										4										
Agropyron trachycaulum	54	5 head										5										
Agropyron spicatum?	53	5										2										
Achillea lanulosa	50	4,5																	6	5	2	T
Galium boreale	83	2																			4	1
Hordeum brachyantherum																						

1 -2

83.0.2.7 20

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Riparian

Transect # 1 (8)

Type Permanent

T 2S R 99W S 14 1/4 1/4 S SENW

Quadrat Size .5m²

Aspect (degrees) 12

Slope (degrees)

Elevation (feet) 6700

Field Analyst(s) Vories, Ellis, Baker

Date 14 July 1975

Site Description

QA Check

Total Percent Cover

Percent of Total · Each Species

Species	Code #	Phenology Code	1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
[illegible] H.8	378	2	420	60							20	2	20	11	38	3	34	10				
Bromus inermis	149	2		37		10																
Agropyron repens	305	2		3		80		100		99		96		95		90		85		50		
Taraxacum officinale	203	2			1	T			1	T	1	T	2	1								
Juncus balticus	206	4																2				2
Ranunculus cymbalaria	207	2																	7	25	2	T
Sporobolus airoides	3[illegible]7	4																	1	T		
Carex [illegible]	387	2																				35
Carex [illegible] vernacula	388	2																				50

83.C.2.2.7-21

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Riparian
Transect # 2 (9)
Type Permanent

15 R 98W S 30 1/4 1/4 S NESW Quadrat Size .5m²

Aspect (degrees) 15
Slope (degrees)
Elevation (feet) 6350

Field Analyst(s) Yorier, Baker
Date 20 July 75

Site Description
QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
~~Pirrrel [illegible]~~				~~90~~																		
Descurain. pennt.	255	6	4	T			8	5	12	1			17	3							20	6
[illegible] sp.	166	4		90		60										[illegible]		40				
Kochia iranica	265	2			110	15	2	1														
Chenopod fremont.	177	2			4	T			2	T	2	T	3	1					3	1		
Unknown #1	379	2			8	1									1	T						
Poa pratensis	107	5						20		5		5		2		6				2		20
Agropyron smithii	052	5						5								T						
[illegible] cinerea	200	5						65		50		70		35		50				40		40
Chenopod album	268	3					2	2					5	3							2	2
Lactuca serriola	259	2							1	2												
Unknown #2	380	3							20	10												
Taraxacum offic.	203	2									1	T	7	2		4			1	T		
Hordeum jubat.	249	5														15		15				
Carex vesicaria sp.	[illegible]	5														15		10				
Ranunculus cymbal.	207	4															4	12				
Sporobolus airoides	208	5																5				

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83.C.2.2.122

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Riparian
Transect # 3(10) Type permanent
T 15 R 98W S 30 1/4 1/4 S NWSE Quadrat Size .5m²
Aspect (degrees) 15 Slope (degrees)
Elevation (feet) 6350
Field Analyst(s) Jones, Baker
Date 20 July 85
Site Description
QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Agropyron ~~sp~~ smithii #2	~~389~~ 058	5		100		90		[illegible]		35		70		60		15		20		40		6
Agropyron sp #1	390	5				2				10		10										
Tarax. offic.	203	6					8	4	1	T												
Chaenact. [illegible]	199	4					1	1			1	T	2	T								
Chenopod. leptoph.	286	4					2	4	3	4												
Agropyron smithii	252	5												2		40		60				
Lactuca serriola	259	2											3	1								
Descur. pinnat.	255	5													4	2						
Carex sp.	069	5														10						40
Chenopod. album	262	4																	1	2		
Unknown #1	381	2																	1	2		
Poa pratensis	107	5																		4		
Hordeum jubat.	249	5																				5
Juncus balticus	276	5																				8
Unknown #2	382	2																			16	4

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LINE-STRIP METHOD 83.C.2.2.8-50
SHRUB, TREE SEEDLING STRATUM

Project 83

Transect Direct 134 Sheet 1 of 2

Vegetation Type Sage

Permanent Transect # 1

15 R 98W S 19 1/4 1/4 S NW SW Transect Length 100 m.

Aspect (degrees) 70° Slope (percent) 2% Elevation (feet) 6520'

Field Analyst(s) Ellis Koehler Kestrel Date 5/28/75

Site Description 100 yds. w. of rd. nr. survey flag at top of small hill QA Check JAW

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Arte. tr.	14	2	52	59		123	61	Normal
2 Cr. viscidiflorus	20		6	15				↓
3 Tetra canescens	31			3	34	13	16	
4 Opuntia polyacantha	37			21		11	4	
5								
6								
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
A. trid	3.05	3.63	50	6.02	6.31	60	9.51	9.25	55	10.12	11.65	60
	13.33	13.50	19	15.38	15.45	62	17.92	18.50	54	3.42	3.72	27
	4.00	4.45	72	4.52	5.00	15	8.51	9.29	85	9.90	10.60	65
	11.36	11.60	25	15.48	15.73	23	11.25	11.39	20	0.35	0.55	20
	1.12	1.42	25	1.65	2.12	30	3.92	4.71	60	4.35	5.15	15
	5.69	6.05	10	5.55	7.47	45	8.66	8.95	30	9.60	10.30	60
	10.72	11.65	90	11.90	12.15	20	13.58	14.01	35	11.04	11.28	15
	16.45	16.60	18	15.40	15.75	26	19.35	19.55	15			
Opuntia polyacantha	11.15	11.35	22	3.14	3.30	10	17.00	17.15	20	15.78	15.92	40
Crys. viscidiflorus	12.43	12.63	15									

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83.C.2.2.8-51

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

1S 98W 19 NWSW

Project 83

Sheet 2 of 2

Vegetation Type Sage

Permanent Transect # 1

Date 5/28/75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
A. nova (cont.)	0.00	0.20	50	0.85	1.12	15	2.28	2.49	15	3.59	3.80	22
	5.15	5.25	60	6.05	6.40	35	6.60	7.20	55	8.85	9.45	55
	12.05	12.30	30	15.20	15.40	20	17.28	17.40	12	18.95	19.48	45
	0.80	1.50	85	10.17	10.60	50	11.08	11.48	40	13.70	13.82	15
	14.03	14.38	35	16.80	17.75	100						

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QUADRAT DATA SHEET 83.C.2.2.8-52
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Sage
Transect # 1
Type Permanent
T 15 R 98W S 19 1/4 1/4 S NW SW
Quadrat Size ~~100 m~~, .5 m²
Aspect (degrees) 70°
Slope (percent) 2
Elevation (feet) 6520'
Field Analyst(s) Ellis, Koehler, Kestrel
Date 5/22/75
Site Description
QA Check J

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover			NA									
Percent of Total · Each Species			NA									
Species	Code #	Phenology Code										
Erig. ovalifolium	225	2 1 3	1									
Phlox multiflora	157	4	2		2	5		T		T	2.5	5
Sphaeralcea coccinea	181	2	T				T					
Oryzopsis hymenoides	100	2	3	2	.5	2	2					.5
Haplopappus nuttallii (K.V.)	155 ~~67~~	2	1½									
unknown #1 irretrievable (K.V.)	238	2	T				1					
Poa secunda sandbergii	108	2			1.5				1	1		
Hedysarum boreale	174	2			1							
Astragalus sp. irretrievable (K.V.)	166	2			.5	1	2	5	4		T	.5
Phlox longifolia	156	314			T			1			.5	
Bromus tectorum	67	2		T								
Cryptantha ~~sp.~~ sericea	(K.V.) ~~71~~ 194	2		3		3						1
Agropyron smithii	52	2		.5						1		
~~Festuca idahoensis~~ Stipa sp.	114	2		1.5								
Cymopterus sp.	168	3		T								
Sisymbrium sp.	120	3						T				
Erigeron sp.	77	3										
Poa sp.	125	2										.5

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LINE-STRIP METHOD 83.C.2.2.8-53
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Sagebrush
Permanent Transect # 2
[illegible]2S R 100 W S 24 1/4 1/4 S SE SE
Transect Length 100m
Aspect (degrees) 340°
Slope (percent) 8%
Elevation (feet) 7800
Field Analyst(s) Koehler, Ellis, Kestrel
Date 5/31/75
Site Description [illegible]
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	115	110	93	79	119	galls
2 Amel ut	32	2	29	33	19	22	16	normal
3 SYMP oreo	33	2	33	42	17	22	9	normal
4 Chvi	20	3	4	7	9	11	21	vigorous
5 Unk #1	43	2		3				normal
6								
7								
8								
9								
10								

Intercepts (cm) m.

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
SYMP	0.15	0.30	12	10.14	10.44	27	19.33	19.48	9	13.94	19.16	24
Amel	2.32	2.37	9	2.41	2.75	34	10.39	10.64	37	14.25	14.53	28
	12.40	12.48	79	16.34	16.55	7-8						
Artr	1.90	2.31	27	3.50	3.96	45	4.55	4.79	54	7.32	8.00	52
	8.13	8.61	43	10.36	10.41	16	12.70	12.83	71	14.97	15.26	19
	15.72	15.78	11	16.56	16.77	21	18.30	18.90	79	0.50	0.70	22
	1.10	1.17	6	2.22	2.80	54	2.87	3.16	18	4.96	5.54	61
	6.02	6.08	32	6.58	6.89	38	7.34	7.90	73	7.91	8.30	41
	8.57	9.15	53	11.38	11.70	19	11.90	12.21	41	12.27	12.50	73
	14.79	14.84	22	14.98	15.63	59	17.11	17.81	63	17.85	19.13	37
	19.48	19.60	26	1.78	2.00	47	3.90	3.09	28	5.90	6.10	36

LINE-STRIP DATA SHEET 83.C.2.2.8-54
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Sagebrush Permanent Transect # 2 Date 5/31/75

m

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Gutierm.	0.40	0.53	3	5.19	5.25	5	5.58	5.64	5			
Shrub #3												
Chri	7.40	7.57	19	0.52	0.55	7						
Artr t.v. (cont)	9.40	9.62	34	12.01	12.42	48	14.05	14.34	39	15.27	15.87	63
	16.48	16.93	72	18.11	18.50	52	19.10	19.20	47	1.98	2.40	50
	3.52	4.16	53	5.22	5.68	76	7.30	7.75	56	7.80	8.04	39
	8.50	8.95	70	11.44	11.46	32	12.15	12.53	34	13.20	13.25	21
	14.05	14.44	58	14.59	14.94	39	15.08	15.69	53	15.37	16.04	71
	16.83	16.99	20	17.93	18.06	100	19.25	19.78	47	1.86	2.40	49
	4.12	4.37	16	7.70	7.71	13	8.50	8.91	61	9.45	10.10	65
	10.25	10.60	43	11.42	11.79	48	12.05	12.65	29	14.51	14.68	10
	17.19	17.45	28	17.73	17.81	8	19.40	19.58	65			

QUADRAT DATA SHEET 83.6.2.2.8-55

HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Sagebrush

Transect # 2

Date 5/31/75

Quadrat Number

Species	Code #	Phenology Code	1	2	3	4	5	6	7	8	9	10
Percent of Total · Each Species												
Poa sp.	125	2,3	2	3	2	1.5			5	5	1	4
& [illegible] ~~sp.~~ glaucaku	216 ~~202~~	2	T									
Trifolium gymnocarpon	173	2,3	T	1		T		T	2.5	1		
Erigeron sp.	77	2	T						T		1	
Phlox hoodii	209	2	30		1	3	40					
Lupinus sp.	94	2		4			1	1	3	4	7	1.5
Zygadenus ~~sp.~~ venenosus K.V.	159	2		T				T				
Agropyron sp.	166	2		T	1	T			T	T		
Castilleja chromosa	154	3		T				T	T	T		
Unk. 1 (deep pinnatifid) - Cichoriaceae	239	2		T								
Unk. 2 (short pinnatifid) - Cichor.	240	2		1	1	1				1		
[illegible]lium sp.	102	2		1	1			6	T		1	
Unk. shrub #3	241	2		2.5		3.5						
Phlox longifolia	156	2,3		T	T							T
Delphinium ~~sp.~~ nelsonii K.V.	167 ~~210~~	2		—	T							
Calochortus sp.	158	2			T							T
Phlox [illegible]												
Lomatium sp.	180	2			T					T	T	1
ndrosace septentrionalis	56	3			T							
Senecio sp.	132	2				1.5						
Solidago sp.	130	2				T	T	T	T	1.5		T
Stipa sp.	114	2				1	1	2				
Astragalus	62	3,4				T						
Koeleria cristata	90	2					1		1	2		1
Poa cusickii	242	3						1				
Physaria [illegible]	175	2						T				
Sphaeralcea coccinea	181	2							T			
[illegible] sp.	85	2									T	
Taraxacum offic.	203	2									T	
Hedysarum boreale	174	3										5

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LINE-STRIP METHOD 83.C.2.2.8-56
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type SAGEBRUSH [✓ Permanent] Transect # 3

[illegible] 25 R 100W S 16 1/4 1/4 S NENE Transect Length 100m

Aspect (degrees) 85 Slope (percent) 20% Elevation (feet) 8530'

Field Analyst(s) [illegible] Date June 1, 1975

Site Description [illegible] QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artemisia tridentata	14	2	124	82	81	106	109	
2 Symphoricarpos oreophilus	33	1	69	37	54	21	42	
3 Chrysothamnus viscidiflorus	20	dormant-8	8	5	10	10	40	
4 Amelanchier utahensis	32	1	5	15	15	14	6	
5 Rosa woodsii	44, 041 28	8			2			
6								
7								
8								
9								
10								

Intercepts ~~(cm)~~ (m)

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Artemisia tridentata	1.78	1.84	.40	15.2	15.66	.68	6.28	7.10	.53	9.20	10.37	.80
	1.77	1.80	.80	15.51	15.98	.87	8.60	8.71	.13	11.00	11.32	.25
	3.38	4.11	.70	16.10	16.33	.75	9.71	10.40	.44	12.40	12.81	.12
	5.12	5.38	.60	17.29	18.33	.325	11.5	13.11	.97	13.52	13.71	.15
	5.97	6.04	.63	18.5	18.65	.11	18.21	18.58	.40	19.15	19.31	.15
	7.56	7.74	.76	0.0	1.10	.30	18.35	18.87	.51			
	8.18	9.12	.73	1.0	1.30	.75	3.85	3.92	.60			
	10.16	11.13	.43	2.10	2.12	.90	4.26	[illegible]	.80			
	11.49	12.15	.77	4.85	5.15	.45	6.40	6.99	.60			
	12.5	12.42	.40	5.60	6.12	.16	7.20	7.94	.85			
Symphoricarpos oreophilus	2.72	2.79	.70	[illegible]	[illegible]	.10	19.78	19.79	.30	14.70	15.00	[illegible]
	5.55	[illegible]	.24	16.45	17.33	.06	1.20	1.40	.20	15.65	16.02	[illegible]
	6.12	6.16	.42	16.25	16.28	.04	2.00	2.10	.40	17.10	17.52	.30
	9.00	[illegible]	.30	16.99	16.91	.08	[illegible]	5.04	.50			
Chrysothamnus viscidiflorus	6.71	6.8	.13	[illegible]	17.9	.06	10.50	10.96	.45			
utah	14.9	[illegible]	.25	5.35	5.51	.10	11.43	12.01	.25			
Amelanchier	13.87	14.05	.57	2.70	3.90	1.05	7.10	8.37	1.07	8.00	8.16	.30
										14.59	[illegible]	.25
										17.60	18.34	.10

[illegible]

LINE-STRIP DATA SHEET 83.C.2.2.8 -5, 7
SHRUB, TREE SEEDLING STRATUM

Project 83

T 2S, R100W, S16, NENE

Sheet 2 of 2

Vegetation Type Sagebrush

Permanent Transect # 3

Date 6/1/75

(meters)

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Artemisia tridentata	5.0	5.85	.45	6.10	6.23	.80	13.08	14.42	.84	15.3[illegible]	15.91	.55
	16.35	16.96	.35	17.28	17.68	.43	18.98	19.02	.03	0.10	0.13	.02
	1.45	1.52	.03	1.89	1.90	.02	2.78	3.01	.11	3.30	3.37	.04
	5.1[illegible]	5.23	.07	6.10	7.45	.75	7.50	9.20	.93	8.71	9.22	.34
	9.52	9.56	.11	10.25	10.40	.55	11.45	11.70	.80	12.60	12.63	.38
	14.4	15.32	.63	16.11	16.91	.72	17.17	17.73	.85			
Symphoricarpos oreophilus	19.6	20.0	4.00	3.05	3.15	.10	3.55	3.61	.08	6.8[illegible]	6.87	.0[illegible]
	7.35	7.48	.06	8.04	8.69	.08	8.51	8.83	.04	8.98	9.34	.2[illegible]
	10.05	10.32	.28	11.36	11.42	.09	12.52	12.98	.75	13.15	13.22	.06
	5.86	6.25	.34	6.57	6.58	.03	6.73	6.75	.18	8.29	8.42	.17
	9.0	9.21	.28	10.21	10.33	.25	10.40	11.41	.60	13.5	14.3	.35
	14.7	15.21	.34	16.31	16.60	.33	17.73	17.96	2.50	18.31	19.72	3.30
	19.8	20.50	.43									
Chrysothamnus viscidiflorus	7.71	7.73	.05	11.72	11.81	.03	19.46	19.49	.02	~~20.40~~	~~20.5[illegible]~~	~~.04~~
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.60	0.60	.01	0.71	0.73	.02
	2.0	2.06	.02	9.92	10.23	.23	15.40	15.61	.31			
Amelanchier ut.	0.0	4.23	4.00	5.80	6.12	.35	10.17	10.[illegible]	.73	[illegible]	[illegible]	[illegible]
	13.2	13.75	1.20	16.1	16.33	.43						

Listed meters instead of cm

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[illegible]
320,
329

83.C.2.2.8-58

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type SAGEBRUSH Transect # 3 Type PERMANENT

T 25 R 100W S 16 1/4 1/4 S NE NE Quadrat Size .5 m²

Aspect (degrees) 85 Slope (percent) 20 % Elevation (feet) 8530'

Field Analyst(s) ELLIS / STAKES Date 1 June 75

Site Description Sagebrush-Symp Assoc / adj. Doug fir, mixed brush QA Check

			Quadrat* Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA									
Species	Code #	Phenology Code										
Carex geyeri	160	2	12	6	10	3	/	6	20	1		
Eriogonum umbellatum	128	2	2	T						3	3	
Carex sp.	68	2		T						2	6	
Delphinium nelsonii	167	2					T				T	
Bromus sp.	163	1					2			T		
Solidago sp.	130	2					T					T
Geranium sp. richardsonii	84	2					T					
Lupinus sp.	94	1								T		
Mertensia sp.	96	3									T	
Poa sp.	125	2									1	T
Agropyron sp.	166	2									T	

* [illegible] in reading

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119

LINE-STRIP METHOD 83.C.2.2.8 -54
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of

Ontract

Vegetation Type Sage
Permanent Transect # 4
15 R 99W S 34 1/4 1/4 S SESE
Transect Length 100m
Aspect (degrees) 356
Slope (percent) 2%
Elevation (feet) 6661
Field Analyst(s) Koehler, [illegible]
Date 6/1/75
Site Description 2nd transect is disturbed by bulldozer
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	198	181	261	228	335	normal
2 Atca	15	2		1				↓
3 Chvi	20	2		2				↓
4 Oppo	37	2					3	↓
5								
6								
7								
8								
9								
10								

Intercepts ~~(cm)~~ → m

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Artr	1.15	1.35	.42	1.45	1.96	.31	2.12	2.75	.69	3.09	3.79	.65
	4.08	4.13	.07	4.15	4.19	.19	4.86	5.09	.18	5.27	6.10	.41
	6.96	7.98	.61	7.36	7.74	.07	8.21	8.44	.24	9.51	9.74	.18
	10.00	10.01	.12	11.11	11.58	.39	13.59	13.99	.30	14.37	14.92	.22
	15.40	15.44	.15	15.84	17.01	.74	17.46	18.31	.65	18.61	18.70	.32
	1.70	1.76	.13	2.16	2.48	.27	3.90	4.68	.71	4.10	4.19	.11
	4.41	4.86	.32	5.35	5.48	.09	6.62	6.66	.04	10.87	10.91	.01
	11.17	11.20	.61	11.81	12.19	.79	12.61	12.74	.07	12.67	12.81	.12
	14.50	14.91	.12	14.71	14.75	.06	15.02	15.05	.06	15.08	15.63	.19
	16.48	16.74	.19	17.71	18.10	.24	18.58	18.88	.27	19.10	19.42	.15
	19.86	20.21	.37	0.39	0.82	.06	0.75	0.84	.09	0.91	1.07	.06
	1.15	1.22	.31	2.35	2.75	.34	2.97	2.14	.19	3.71	3.89	.21
	4.30	4.71	.29	4.80	5.06	.21	5.44	5.18	.37	6.27	6.48	.11
	7.25	7.29	.08	8.11	8.15	.07	8.43	8.45	.06	8.47	8.48	.03
	8.90	9.00	.10	9.37	9.84	.39	9.87	9.93	.24	10.54	10.65	.13
	10.95	11.20	.30	11.96	12.34	.21	13.54	13.63	.12	15.00	[illegible]	.14
Chvi	1.99	2.03	.02	13.17	13.39	.06	1 CONT	→				

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83.C.2.2.8-66

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

1S 99W 34 SE SE

Project 83

Sheet 2 of 2

Vegetation Type Sagebrush Permanent Transect # 4 Date 6/1/75

Species	5 I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
A. tr	1④.45	15.60	.07	16.21	16.29	.09	17.02	17.31	.25	17.75	17.95	.14
	19.60	20.20	.39	0.25	0.37	.31	0.31	0.42	.48	0.65	1.11	.37
	2.27	2.40	.32	3.18	3.59	.43	3.50	3.74	.12	3.93	4.05	.07
	6.08	6.15	.18	6.33	6.38	.10	6.90	7.62	.38	4.80	4.51	.19
	4.92	9.80	.23	9.80	9.15	.31	10.59	11.02	.27	10.86	11.33	.41
	11.37	12.06	.58	12.90	13.15	.29	15.89	16.24	.36	16.25	16.38	.33
	16.50	15.57	.40	17.25	17.49	.29	17.48	17.73	.25	17.90	18.24	.30
	18.40	18.42	.03	18.43	18.50	.13	19.08	19.70	.32	19.60	20.18	.35
	0.20	0.71	.30	1.49	1.62	.05	3.75	4.19	.28	5.89	6.76	.51
	6.80	6.92	.33	6.91	7.19	.41	7.40	7.84	.32	7.43	8.09	.21
	8.19	8.26	.07	8.67	8.73	.05	8.84	9.10	.19	9.16	9.87	.41
	9.87	9.99	.12	10.59	10.82	.14	10.57	12.34	.37	12.80	13.60	.73
	14.27	14.30	.37	14.46	15.05	.80	15.35	15.60	.26	15.79	15.84	.05
	15.90	15.95	.07	16.10	16.32	.31	16.60	16.70	.17	17.50	19.50	.90
	19.42	19.47	.05									

1S 99W 34 SESE.

QUADRAT DATA SHEET 83.C.2.2.8-61
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Sagebrush
Transect # 4
Date 6/1/75

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Percent of Total · Each Species			NA —									
Species	Code #	Phenology Code										
Sihi	112	2			.5					T		
PHYS sp	206	2			T							
Brte	67	2				T						
unknown #1	260	2						T				
Poa sp.	125	2				T			T			
Orhi	100	2					.5	T				
AGRD	166	2					.5	T	1.	T	1.5	T
unknown #2	261	2						T		T		
SISY	205	2						T	T	T	T	T

LINE-STRIP METHOD 83.C.2.2.8-62
SHRUB, TREE SEEDLING STRATUM

- begins near station J6 and runs at 83°

Project 83
Sheet 1 of 2
ON Tout

Vegetation Type Sagebrush
Permanent Transect # 5
[illegible] 25 R 99W S 8 1/4 1/4 SE1/4 SE1/4
Transect Length 100 m
Aspect (degrees) 340°
Slope (percent) 9%
Elevation (feet) 7200'
Field Analyst(s) Koehler Kostrel
Date 5/30/75
Site Description dense black sage hillside
QA Check JOrk

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 A. tr	14	2	96	117	97	137	96	good
2 Crvi	20	2	41	33	66	42	44	|
3 SYMP	33	2	40	19	5	3	17	|
4 Artr VT	32	2	4	17	14	15	6	↓
5								
6								
7								
8								
9								
10								

Intercepts (cm) m

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Ar.tr	0.10	0.50	.30	0.91	1.40	.40	1.70	2.0	.45	2.62	3.14	.40
	3.06	3.85	.35	[illegible]	[illegible]	.20	9.22	9.48	.80	10.10	[illegible]	.45
	[illegible]	11.85	.18	13.03	13.08	.44	15.10	15.17	.08	15.54	15.77	.11
Cv.	11.39	11.60	.37	16.90	17.05	.53	19.11	19.14	.10	19.12	[illegible]	.65
	19.60	20.10	.45	1.37	2.08	1.00	3.20	3.39	.24	4.03	4.30	.47
	4.21	4.99	.78	5.40	5.68	.23	6.50	7.14	.37	7.75	8.55	.52
	9.89	9.90	.22	10.88	11.12	.24	14.08	14.38	.76	15.70	[illegible]	.37
	16.57	17.04	.47	17.50	18.04	.68	19.14	19.67	.39	0.00	0.74	.64
← cactus	2.07	2.29	.65	4.90	5.04	.18	6.00	6.08	.05	6.94	7.02	.07
	7.81	8.72	.92	14.58	14.70	.34	14.93	15.05	.18	15.44	15.57	.16
	17.57	17.60	.25	17.35	17.87	.18	1.23	1.13	.24	2.73	2.98	.40
	4.31	5.10	1.00	7.12	7.22	.11	7.60	8.04	.47	9.10	9.34	.55
	9.74	9.85	.18	10.51	10.90	.47	11.06	11.33	.36	13.57	13.78	.31
	14.61	14.86	.27	15.15	15.48	.34	15.63	15.70	.43	17.33	17.61	.29
SYMP	4.84	4.93	.20	6.96	7.05	.03	[illegible]	[illegible]	.55	17.00	17.07	.22
	0.70	1.41	.80	1.85	2.37	.55	5.05	5.39	.24	5.65	[illegible]	[illegible]
	2.61	2.59	.34	17.91	17.98	.11	2.20	2.49	1.00	3.74	4.55	.64

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LINE-STRIP DATA SHEET 83.C.2.2.8-63
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Sagebrush Permanent Transect # 5 Date 5/30/75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
rvi	9.18	11.24	.20	13.16	13.21	.05	13.77	14.20	.27	11.80	11.93	.32
	1.80	1.95	.11	4.17	4.21	.07	0.94	1.04	.12	3.74	4.21	.32
	7.05	7.07	.21	8.50	9.01	.29	10.24	10.27	.07	17.62	17.94	.14
	2.18	2.41	.18	13.10	13.36	.14						
Arno(cont)	18.83	19.64	.79	1.72	2.32	.76	3.40	3.46	.33	5.80	6.82	.89
+√	9.13	9.46	.24	10.25	10.81	.20	10.99	11.63	.59	12.30	12.43	.31
	13.49	13.58	.16	14.65	14.85	.31	15.49	15.55	.17	15.25	15.93	.33
	18.34	18.60	.48	18.97	18.99	.04	19.75	20.10	.34			
SYMP(cont)	6.02	6.90	.38	7.81	8.34	.49						

83.C.2.2.8-64

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Sagebrush Transect # 5 Type Permanent

T 2S R 99W S 8 1/4 1/4 SSE¼SE¼ Quadrat Size 100m

Aspect (degrees) 340° Slope (percent) 9% Elevation (feet) 7200'

Field Analyst(s) Koehler Kestrel Date 5/30/75

Site Description dense black sage hillside QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Kocr.	90	2	.5					T	T	1.	.5	
Crepis acuminata	243	2		.5			T	T		T		.5
PENS. sp	102	2	T		T			2.		1.	2.	2.
Agoseris glauca	~~302~~ 311 n.v.	2	T								1	
Poa spp.	125	2	5.5	5		4.	3.	6.		10.	12.	12.
SIKY sp	205	2	T									
STIP sp	114	2	T	T								
[illegible]	100	2	1.5	2.5	3.	.5		1.	T			
LAMA sp	180	3		T		.5			T		.5	T
AGRO. sp	166	2		T		.5	T	.5		T	T	
CRYP sericea	194 ~~71~~	3		T				.5				
TR~~IT~~ Gymnocarpon ~~sp~~	173 n.v. ~~2710~~	2&3		1.5		.5	.5		2.	T	1.	
A[illegible] m.	52	2		2	1.							
Euphorbia robusta	244	2		.5								
ERIG sp	77	2&3	.5	T	T	.5	1.5	.5	1.	1.		.5
~~SPEP~~		~~2~~		~~T~~								
HAAC. Haplopappus acaulis	153	2		.5								
Phlo. Phlox longifolia	105	2				T					T	T
Cach. Castilleja chromosa	154	3				.5	T				.5	T
Feid Festuca idahoensis	207	2					T					T
CLAYtonia	245	3						T				
ASTRagalus sp.	62	2						T				
LUPI sp	94	2							5.		3.	6.
Phmu. Phlox multiflora	157	2&3								T		
OENOthera	98	2									T	T
PLAN. Plantago	146	2									T	
SPHA. Sphaeralcea coccinea n.v. 161		2										T

*Note: Change Cirsium

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LINE-STRIP METHOD 83.C.2.2.8 -63
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Sagebrush
T 15 R 93w S 20 1/4 1/4 S NE/SW
Permanent Transect # 6
Transect Length 100 m
Aspect (degrees) 150
Slope (percent) 2%
Elevation (feet) 6420
Field Analyst(s) Ellis / [illegible]
Date 5/30/75
Site Description bottomland
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Save	29	2	44	24				normal
2 Ar tr	14	2	105	108	53	62	65	many [illegible]
3 Ch na	19	2	39	25	40	32	28	many [illegible]
4								
5								galls
6								
7								
8								
9								
10								

Intercepts (cm) m

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Save	1.21	2.22	1.05	3.12	3.32	.18	4.20	4.43	.23	11.70	12.50	.80
	14.50	14.65	.15	16.0	16.18	.85	16.31	17.05	.74	18.0	18.31	[illegible]
	19.05	11.25	.55	1.08	1.31	.30						
Ar tr	5.22	5.37	.15	5.90	6.03	.24	7.95	8.11	.75	9.30	10.10	.52
	1.31	11.00	.65	[illegible]	13.66	1.25	15.02	16.04	.12	19.69	[illegible]	.65
	2.60	2.90	.25	2.95	4.60	.80	4.65	5.21	1.10	10.55	[illegible]	[illegible]
	11.13	11.32	.42	13.65	14.10	.47	7.60	[illegible]	.85	12.55	[illegible]	.70
	0.25	1.37	1.20	3.35	4.10	.66	6.30	7.17	1.07	12.95	13.50	1.5
	15.55	16.05	.72	3.01	[illegible]	1.20	0.30	1.33	1.45	2.25	3.15	[illegible]
	3.09	3.23	.23	11.12	11.22	.10	11.30	11.42	.08	[illegible]	[illegible]	.07
	12.02	12.15	.15	[illegible]	[illegible]	.21	[illegible]	[illegible]	.15	14.43	15.10	1.7
	12.65	13.11	1.20	13.60	[illegible]	.25	1.72	3.76	2.30	4.20	4.61	.25
	5.24	5.04	.25	14.12	15.21	2.11	15.60	16.63	1.60	16.03	13.42	2.50
	18.70	19.75	2.20									
CONT	[illegible]											

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1S 93W S30 MESW

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project B3

Sheet 2 of 2

Vegetation Type Sagebrush Permanent Transect # 6 Date 5/30/75

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Chna	9.00	9.32	.40	2.92	3.49	.75	3.71	3.93	.70	5.08	6.00	1.30
	13.25	13.55	1.30	3.40	3.32	.55	7.81	8.11	1.10	8.50	8.65	.33
	10.05	10.15	.15	14.40	15.25	.95	17.60	18.11	.55	2.90	3.42	.14
	10.41	10.93	.55	15.42	16.42	1.00	7.02	0.75	1.10	1.24	1.80	.73
	4.51	4.91	.57	9.35	11.55	2.20						

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83.C.2.2.8--6 F

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Sagebrush Transect # 6 Type Permanent

T 1S R 98W S 30 1/4 1/4 S NESW Quadrat Size 0.5 + 1 m

Aspect (degrees) 150 Slope (percent) 2 Elevation (feet) 6420

Field Analyst(s) Ellis / Turner Date 5/30/75

Site Description bottomland QA Check

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		NA										
Percent of Total · Each Species		NA										
Species	Code #	Phenology Code										
Agropyron smithii	52	2	1	.5	8	1			10	6		
Koeleria cristata	90	2	1									
Sisymbrium sp.	205	4	T	T	T							
Vicia nuttallii	246	5	1			1						
Lepidium montanum	247	2	.5		1							
Elymus cinereus	200	2				1.5	T	10		1	.5	1
Taraxacum offic.	203	2				T	1					
" sp.	175	2				1	3					
Hordeum jubatum	249	2						5				

83.C.2.2.8-68

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

near Track [illegible]

Vegetation Type SAGE BRUSH

Non-Permanent Transect # 7

T 25 R 99w S 6 1/4 1/4 S SE/NE Transect Length 100m

Aspect (degrees) 165 Slope (percent) 20 % Elevation (feet) 7240 ft.

Field Analyst(s) Ellis Turner Date 5/30/75

Site Description eroded site, [illegible]

QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	79	75	72	58	69	some → [illegible] galls
2 Teca	31	2	9	8	5	14	2	heavy browsing
3 Atco	16	2	2	6	8	29	3	normal
4 Gyor	33	2	7	3	9	3	6	normal
5 China	19	2		2	3	8	15	heavy browse
6 Chvi	20	2			13	4		" "
7 atca	15	2					4	" "
8								
9								[illegible]
10								[illegible]

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	1.57	2.30	2.35	2.62	4.12	4.25	6.0	6.32	7.20	[illegible]
	8.76	9.71	9.80	10.91	12.71	13.51	13.13	13.99	[illegible]	[illegible]
	15.31	[illegible]	1.61	2.01	2.39	3.10	3.15	3.79	[illegible]	[illegible]
	[illegible]	6.75	9.01	10.62	11.19	[illegible]	[illegible]	13.15	13.30	[illegible]
	[illegible]	14.34	15.02	15.31	[illegible]	[illegible]	13.74	13.77	19.03	[illegible]
	0.49	1.12	3.15	3.26	6.23	6.55	6.35	7.02	7.30	7.40
	9.43	9.42	13.39	14.22	15.36	16.45	12.45	13.36	0.0	0.71
	2.44	2.30	4.25	5.31	6.71	7.41	16.10	16.20	17.11	[illegible]
	0.39	1.59	5.74	6.79	9.65	[illegible]	9.35	9.52	10.09	11.2
	16.59	17.13	17.10	17.93						
Atca	4.30	4.41								
Teca	16.64	16.75	12.65	12.58						
[illegible]or	16.79	17.20								
China	19.81	20.04	10.32	10.99	14.42	14.64				
atco	2.25	2.64	6.41	6.76						

ECI

LINE-STRIP DATA SHEET 83.C.2.2.8-69

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

OFF TRACT

Vegetation Type Sagebrush

Non-Permanent Transect # 8

T 1S R 93W S 33 1/4 1/4 S NWSW

Transect Length 100 m.

Aspect (degrees) 270

Slope (percent) 3%

Elevation (feet) 6500'

Field Analyst(s) [illegible]

Date 28 [illegible] 75

Site Description Open stand on ridge, loessal material

QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Antr	14	2	43	39	45	46	62	normal
2 [illegible] lanata	22	2	11	6	0	0	3	|
3 ~~[illegible]~~	~~19~~	~~2~~	[illegible]			[illegible]	[illegible]	|
4 Chry depressus	34	2	38	10	30	6	4	||
5								
6								
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Antr	7.10	[illegible]	8.46	9.05	[illegible]	11.06	[illegible]	13.98	15.72	[illegible]
	[illegible]	16.58	[illegible]	18.45	[illegible]	[illegible]	11.29	11.41	[illegible]	[illegible]
	2.09	2.38	[illegible]	[illegible]	3.90	[illegible]	[illegible]	4.98	6.41	[illegible]
	7.11	8.26	9.09	[illegible]	10.05	10.10	10.76	11.25	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	3.15	4.10	4.00	5.19	[illegible]	[illegible]	[illegible]	9.70
	[illegible]	[illegible]	13.02	13.66	[illegible]	14.15	[illegible]	[illegible]	[illegible]	2.30
	[illegible]	[illegible]	[illegible]	7.60	[illegible]	[illegible]	[illegible]	10.30	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]						
✓										
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						

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LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type SAGEBRUSH   Non-Permanent Transect # 9

T 25   R 99W   S 11   1/4 1/4 S SE/NW   Transect Length 100 ft

Aspect (degrees) 303°   Slope (percent) 6° 11%   Elevation (feet) 6930

Field Analyst(s) Turner | Pick   Date 8/31/75

Site Description Invaded by Juniper & Pine   QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	80	64	81	110	156	fewer green
2 Pied	2	2	1	3	0	0	0	normal
3 Juos	1	2	2	3	2	1	0	normal
4 Chvi	20	2	10	39	53	34	75	[illegible]
5 Oppo	37	2	1	1	0	1	0	normal
6								
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	4.90	5.22	9.88	10.51	11.27	11.70	12.42	12.74	2.80	3.30
	14.88	15.13	16.75	17.20	19.20	19.22	2.30	2.53	13.83	14.40
	14.45	15.44	15.88	16.02	0.43	0.79	4.10	4.81	6.80	7.61
	8.85	9.10	11.29	11.46	12.82	13.35	13.46	13.53	16.52	17.41
	18.40	18.51	19.59	20.08	2.07	2.25	5.45	6.14	6.82	7.19
	8.60	9.20	9.81	9.92	11.08	11.51	12.00	12.84	13.10	13.42
	14.11	14.60	16.15	16.51	18.49	18.90	2.57	3.56	3.82	4.02
	4.70	4.89	5.69	6.34	6.91	8.01	8.20	8.44	8.64	8.88
	9.80	10.50	10.89	11.61	11.90	12.18	13.46	14.07	14.55	15.07
	15.05	16.55	17.15	17.37	18.00	18.14	18.90	19.39	19.70	19.92

R[illegible] PROCESS REPORT

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83.6.2.2.8-71

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project B3
Sheet 2 of 2

Vegetation Type Sagebrush
Non-Permanent Transect # 9
Date 5-31-75

Species	Intercepts (cm) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Chvi	14.67	14.80	1.69	1.76	6.58	6.96	9.36	9.60	0.90	0.96
↓	5.36	5.45	18.31	18.45						
Juos	1.32	1.49	7.90	8.24						

33232

LINE-STRIP DATA SHEET 83.C.2.2.8-72

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type SAGEBrush

Non-Permanent Transect # 10

T 2S R 99W S 27 1/4 1/4 S NW/SE

Transect Length 100m

Aspect (degrees) 328°

Slope (percent) 3%

Elevation (feet) 7200

Field Analyst(s) Turner / Rice

Date 5/31/75

Site Description P-J invading sage

QA Check D Hart

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Ar tr	14	2	109	83	89	99	89	[illegible]
2 Chvi	20	2	21	23	20	15	17	[illegible]
3 Oppo	37	2	1	0	0	3	2	"
4 Pied	2	2	0	1	0	1	1	"
5 Syor	33	2	0	0	1	0	0	"
6								
7								
8								
9								

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Ar tr	0.71	1.33	2.00	2.76	3.43	3.90	5.50	6.51	6.70	7.10
	7.90	8.12	8.66	8.82	10.20	10.50	13.7	14.12	15.52	15.95
	16.81	17.00	17.65	17.80	18.75	19.25	1.45	2.13	2.92	3.56
	3.60	4.57	5.39	5.78	6.51	7.10	8.18	9.12	10.30	11.[illegible]
	17.78	18.40	18.62	19.5	1.62	1.63	1.73	2.60	3.59	3.[illegible]
	4.51	4.78	5.32	6.23	11.55	12.00	12.50	12.77	13.51	14.10
	17.10	17.29	19.60	19.89	0.66	1.14	1.72	1.85	2.61	3.81
	3.22	3.54	5.03	5.90	7.13	7.21	7.95	8.40	8.71	8.73
	10.6	10.89	11.80	11.95	12.81	13.39	14.82	15.65	15.93	16.00
	18.42	18.70	1.27	1.83	2.33	2.44	3.62	3.80	5.60	6.23
	7.82	9.75	10.74	10.7[illegible]	12.30	12.35	18.53	18.81		

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LINE STRIP DATA SHEET 83.6.2.28-73
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

Vegetation Type Sagebrush
Non-Permanent Transect # - 10
Date 5/31/78

Species	Intercepts (cm)									
	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Chvi	4.52	4.80	16.61	16.80	7.28	7.29	8.66	8.83	9.50	9.61
	11.36	11.40								
''										
Pied	11.58	11.86								

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LINE-STRIP METHOD 83.C.2.2.8-74
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Sage
Permanent Transect # 11
T 2S R 99W S 14 1/4 1/4 S SWNW
Transect Length 100 m
Aspect (degrees) 110°
Slope (percent) 3° 5%
Elevation (feet) 6800
Field Analyst(s) Vories Koehler Kratzer
Date 6/2/75
Site Description ~~mature~~ mature stand
QA Check J Olive

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Art. tridentata	14	2	116	84	114	146	177	galls
2 Sarco vermiculatus	29	2	2	9	15	21	31	browsed
3								
4								
5								
6								
7								
8								
9								
10								

Intercepts (~~cm~~) meters

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Art. Tridentata	0.30	0.50	.45	1.50	1.83	.50	2.80	2.93	.40	3.30	3.51	.32
	3.72	4.20	.60	4.30	4.44	.67	4.81	3.34	.29	5.52	5.60	.6
	5.74	6.10	.32	5.34	5.50	.23	7.20	7.67	.90	8.04	8.18	.47
				8.64	9.67	.90	10.10	11.11	.60	11.72	13.30	.20
	15.10	15.96	.50	16.30	16.70	.47	17.10	17.7	.55	17.80	18.22	.38
	3.00	3.32	.35	3.45	3.51	.41	4.63	4.77	.29	4.95	5.15	.32
	6.48	6.57	.51	7.55	7.90	.95	8.33	8.60	.90	10.18	10.27	.19
	11.50	12.51	.50	13.65	13.90	.36	14.00	14.53	.42	14.72	14.94	.54
	16.80	17.35	.47	17.93	18.40	.40	18.63	19.73	.80	19.80	20.30	.35
				3.12	3.50	.25	3.90	4.93	.76	5.01	5.16	.70
	5.60	6.27	.37	6.90	6.93	.7	7.01	9.53	.62	7.40	7.47	.43
	8.96	9.67	.53	10.13	10.37	.67	10.94	11.30	.78	12.40	12.70	.45
	12.39	13.60	.57	15.09	15.15	.40	15.85	16.30	.65	16.95	17.00	.25
	17.27	17.93	.60	18.52	19.15	.60	19.80	20.00	.75	237	3.11	.76
Sarco vermiculatus	18.90	19.10	.21	1.63	1.84	.24	15.41	16.60	1.20	1.50	2.80	.32
	7.84	8.50	.47	10.30	10.70	.37	5.95	6.58	.47	16.40	16.65	.14

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83.C.2.2.8-75

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

T2S R99W S14 SWNW

Sheet 2 of 2

Vegetation Type Sagebrush Permanent Transect # 11 Date 6/2/75

Species	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia	I1	I2	Dia
Art. tridentata	4.10	4.99	.65	5.76	6.40	.71	6.67	6.98	.21	7.10	7.75	.60
Cont.	10.70	10.[illegible]	.37	10.91	11.40	.59	11.63	11.67	.08	12.06	12.27	.28
	12.81	13.13	.41	13.48	13.56	.53	13.80	14.67	.71	15.65	15.92	.78
	16.23	16.42	.78	16.70	17.90	.94	18.13	18.31	.42	18.47	19.05	.30
	19.50	19.[illegible]	.30	0.65	1.50	.82	2.45	2.62	.48	3.10	3.20	.2
	3.85	4.26	.65	4.71	5.01	.77	5.84	6.23	.38	7.00	7.33	.34
	7.60	7.92	.38	8.60	9.27	.58	9.36	9.63	.22	10.75	11.70	.95
	12.45	12.70	.25	12.85	13.05	.25	13.30	13.60	60	14.90	16.00	1.40
	17.30	17.70	.50	18.25	18.90	.90	19.20	19.50	.35	19.70	20.00	.8
rco vermiculatis												
	4.30	4.52	.63									

QUADRAT DATA SHEET 83.C.2.2.8-76
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Sage Transect # 11 Date 6/2/75
T2S R99W S14 SWNW

Quadrat Number

Percent of Total · Each Species 4/11/			1	2	3	4	5	6	7	8	9	10
Species	Code #	Phenology Code										
(Descuarainia richardsonii	313 ~~250~~	2.	T	T		5.	T	1.		T	T	1.5
Chenopodium fremontii	198	2		T		T		T	T			T
Senecio multilobatus	251	2			T	1.	T			.5		
Sisymbrium sp	205	2			T							
Lepidium	92	2			T							
Senecio sp	132	2			T							
Sitanion histrix	112	2						T	T			T
Kochia iranica	T96e 265	2								T		

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83. C. 22.8-77

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

NOM

Vegetation Type Sagebrush Permanent Transect # 12

15 R 100 W S 36 1/4 1/4 S NE/NW Transect Length 100 m.

Aspect (degrees) 200 Slope (percent) 5 % Elevation (feet) 7200'

Field Analyst(s) Pide / Ellis Date 6-3-75

Site Description rolling - trans. to hill, many young sage, sparse, scat. large shrubs QA Check

bare soil Amalanchi clones w/spot scattered

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Art. trid.	14	2	75	87	149	61	129	many galls
2 Amalanchier utah	32	2	1	4	1	2	3	norm.
3 Symphoricarpos ore	33	2	9	7	2	5	5	"
4 Chryso vicid.	20	2	31	20	8	6	14	"
5 Tetradymea cans.	31	2	–	8	1	1	2	"
6 Purshia tridentata	24	2	–	1	1	2	4	"
7								
8								
9								
10								

Intercepts ~~(cm)~~ meter

Species	I_1	I_2	~~Dia~~	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Art. trid.	4.50	5.26		5.91	6.44		7.09	7.19		8.53	8.64	
	9.82	9.81		10.28	10.60		12.57	12.76		12.32	12.45	
	16.58	16.63		16.91	17.03		19.23	19.76		0.18	0.38	
	0.87	1.34		3.10	3.41		3.96	4.75		7.52	7.60	
	19.74	19.83		1.98	2.01		2.93	2.99		4.60	4.65	
	5.49	5.60		5.87	5.93		8.22	8.61		9.72	9.75	
	11.60	11.72		12.03	12.10		12.14	12.25		12.31	12.49	
	13.69	13.80		13.89	14.00		14.43	14.62		15.76	15.84	Con't
Chryso vicid	10.00	10.10		13.31	13.35		13.57	13.64		19.18	19.93	
	7.65	7.78										
Amelanchier VT	18.97	19.20		1.22	1.75		3.80	4.64				

LINE STRIP DATA SHEET 83. C. 2.2.8-18
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

R. 100 W
T. 1S
S. 36
NE/NW

Vegetation Type Sagebrush
Non-Permanent Transect # 12
Date 6-3-75

Intercepts (cm)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Tetradymia	12.65	12.71								
canescens										
Art. trid.	16.80	17.24	18.59	18.69	0.80	1.03	1.93	2.19	2.81	2.56
(CONT'D)	3.04	3.15	4.80	5.04	8.20	9.00	10.20	10.26	11.04	11.11
	12.78	12.80	2.93	3.10	3.19	3.26	3.76	3.83	5.76	5.79
	9.37	9.40	10.70	10.75	12.70	12.79	14.26	14.36	15.40	15.51
	17.20	17.43	17.59	17.79	17.99	18.21				
Purshia trid.	15.12	15.18	18.54	19.44						
Symphoricarpos oreophilus	18.22	18.70								

83.6.2.2.8-79

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

getation Type Sagebrush Non-Permanent Transect # 13

T 15 R 99W S 16 1/4 1/4 S NE SE Transect Length 100 m

Aspect (degrees) -60° Slope (percent) 12% Elevation (feet) 6700

Field Analyst(s) VORIES / [illegible] Date 6 June 75

Site Description dense, bottomland [illegible] on alluvial fan QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artemisia tridentata	14	2	138	144	211	74	83	
2 Chrysothamnus viscidiflorus	20	2	59	43	47	13	10	
3 Opuntia polyacantha	37				2			
4 Symphoricarpos oreophilus	33						1	
5								
6								
7								
8								
9								

Intercepts ~~(cm)~~ m

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	1.55	2.10	2.16	2.29	3.02	3.33	4.19	4.43	5.69	[illegible]
	7.19	7.60	7.90	8.58	8.91	9.25	9.89	9.95	10.21	[illegible]
	12.65	12.79	13.29	14.02	14.80	15.50	16.56	16.63	18.24	[illegible]
	18.99	19.01	.86	.93	1.52	1.61	2.0	2.49	3.42	[illegible]
	4.39	4.41	4.89	5.01	5.0	5.69	6.33	6.45	8.0	[illegible]
	9.49	9.81	9.93	10.08	10.45	10.55	10.61	12.83	13.20	[illegible]
	14.79	15.39	15.92	16.22	16.62	16.71	17.60	17.75	18.10	[illegible]
	19.01	20.00	0.0	.35	.51	.71	.70	.82	1.09	1.15
	2.01	2.23	2.26	2.67	3.41	3.50	4.16	4.29	4.42	[illegible]
	5.07	5.39	5.49	6.32	6.32	7.01	7.30	7.35	7.43	[illegible]
Chvi	1.54	1.57	5.91	5.99	10.95	11.22	3.24	3.37	17.23	[illegible]
Sym. oreophilus	14.15	14.73								

83.C.2.2.8-80

1S 99W 16 NESE

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 2

Vegetation Type Sagebrush
Non-Permanent Transect # 13
Date 6 June 75

Species	Intercepts (cm) I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
ArV	9.01	9.45	9.60	9.96	11.32	11.39	12.33	12.52	13.12	13.30
	13.92	14.12	14.29	14.35	14.64	15.10	15.55	15.62	15.71	15.81
	17.50	18.52	18.75	18.96	1.21	1.42	1.95	2.03	3.58	4.22
	4.96	5.08	5.39	5.56	6.43	6.78	6.80	6.87	7.11	7.29
	8.80	9.01	10.40	10.59	11.19	11.26	13.10	13.35	14.39	15.19
	17.92	19.09	19.21	19.86	.63	.86	2.15	2.49	2.75	4.59
	5.19	5.32	5.69	6.33	8.21	8.85	10.61	10.68	11.10	11.55
	11.61	11.89	11.95	12.51	13.30	13.55	14.92	15.12	17.81	17.90
	18.35	18.80								

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83. C. 2.2. 8-82

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Sagebrush Non-Permanent Transect # 14

T 2S R 98W S 8 1/4 1/4 S NE SW Transect Length 100 meters

Aspect (degrees) 340° Slope (degrees) 7° Elevation (feet) 6820

Field Analyst(s) Ellis and [illegible] Date 15 July 75

Site Description Upland sage decadent stand invaded by JUNIP QA Check RDM 7/23

deep fine textured soil eroded

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artemesia tridentata	14	3 [illegible]	69	73	66	63	51	?, [illegible]
2 Juniperus osteosperma	1	2	7	2	0	4	2	|
3 Chrysothamnus viscidiflorus	20	3	2	6	14	12	24	|
4 Pinyon edulis	2	2 ↓	0	0	0	0	1	↓
5								
6								
7								
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	0.00	0.31	0.60	0.93	4.27	5.34	6.59	6.70	7.38	7.97
	8.09	8.30	8.80	8.88	9.79	9.92	10.84	11.08	11.64	12.27
	13.41	13.72	14.07	15.53	15.80	16.45	17.28	17.51	18.17	18.29
	18.87	18.92	19.93	20.00	0.00	0.09	0.29	0.43	1.26	1.62
	2.38	2.55	3.62	3.73	3.79	3.83	3.94	5.71	8.81	9.02
	11.10	11.57	11.70	11.91	12.53	12.50	14.59	14.93	15.68	[illegible]
	16.55	17.45	18.01	18.81	19.10	19.18	19.78	20.00	0.00	1.50
	1.63	1.89	3.39	3.65	7.75	8.09	8.53	8.84	9.51	9.55
	10.78	10.80	11.16	11.33	12.04	12.31	14.95	15.22	6.40	6.70
	8.13	8.14	8.57	9.00	9.98	10.34	10.39	10.41	10.84	[illegible]
	11.53	11.59	12.00	12.03	13.50	14.13	15.06	16.57	16.99	[illegible]
	17.21	17.38	0.28	0.49	0.62	0.87	1.84	2.01	2.20	[illegible]
	2.45	2.75	3.75	3.99	4.19	4.61	5.39	5.58	5.68	5.96
	7.38	7.82	10.57	10.61	14.40	14.81	17.04	17.47	19.05	19.02
[illegible]	6.03	6.15	2.73	2.79	11.36	[illegible]	11.41	11.60		

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83.C.2.2.8-81

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

ctation Type Sagebrush Transect # 19 Type NON-Perm

T 2S R 98W S 8 1/4 1/4 S NESW Transect Length 100 meters

Aspect (degrees) 340° Slope (degrees) 7° Elevation (feet) 6820

Field Analyst(s) Ellis Harding Date 15 July 75

Site Description Upland sage decadent stand invaded QA Check RBM 7/23

deep fine textured soil eroded

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juniperus osteosperma	1	5 ?, non	0	0	0	1	0	BROWSED MOUND [illegible]
2								
3								
4								
5								

Species	Intercepts (m) I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter (cm) of Each Tree
Juos ??									Q4: 15,

83.C.2.2.8-83

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

getation Type Upland Sage   Transect # 15   Type NON-PERM

T 25   R 99W   S 24   1/4 1/4 S NW NE (S½)   Transect Length 100 meters

Aspect (degrees) 360   Slope (degrees) 10°   Elevation (feet) 6980

Field Analyst(s) Ellis, Harding   Date 15 July 75

Site Description   QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juniperus osteosperma	1	5. 2, RFM	1	0	0	0	0	NORMAL
2								
3								
4								
5								

Species	Intercepts (m) I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter (cm) of Each Tree
Juos	/	/	/	/	/	/	/	/	Q1: 21
									Q2 ZERO
									Q3 |
									Q4 |
									Q5 |

83.C.2.2.8.84

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

[illegible]etation Type Upland Sage

Non-Permanent Transect # 15

T 2S R 99W S 24 1/4 1/4 S NWNE (S½)

Transect Length 100 meters

Aspect (degrees) 360°

Slope (degrees) 10°

Elevation (feet) 6980

Field Analyst(s) Ellis Harding

Date 15 July 1975

Site Description mature stand bordering P-J stand deep soil

QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artemisia tridentata	14	3 7, [illegible]	64	75	86	84	76	[illegible]
2 Chrysothamnus viscidiflorus	20	3	9	27	5	1	21	HEAVY BROWSE
3 Juniperus osteosperma	1	2	1	1	0	0	0	[illegible]
4 Symcho	33	2	1	0	2	0	0	↓
5 Pinyon edulis	2	2	0	1	0	0	0	↓
6 Amalanchier nut	32	5	0	1	0	0	0	↓
7								
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	0.00	0.32	1.09	1.24	1.70	1.72	2.36	2.46	2.79	2.93
	3.29	3.52	3.89	4.18	4.93	5.46	5.56	6.20	6.87	7.23
	7.72	7.92	10.82	11.11	11.30	11.36	14.30	14.57	15.05	15.28
	18.71	19.80	0.00	0.10	0.35	0.63	0.93	1.17	1.87	2.01
	4.39	4.82	6.00	6.34	6.54	6.86	7.87	8.07	8.38	[illegible]
	8.48	8.62	8.99	9.14	9.89	9.92	10.20	10.31	10.47	10.52
	11.73	12.31	14.69	14.95	15.29	15.52	16.52	16.91	17.31	18.41
	18.56	19.36	19.51	19.75	0.00	0.09	0.20	0.28	0.32	0.36
	0.46	0.67	0.99	1.09	1.18	1.56	1.84	2.37	2.69	2.74
	3.56	3.72	3.82	4.22	4.40	4.79	4.99	5.56	5.95	5.97
	6.60	6.92	7.15	7.16	7.76	8.30	9.26	9.32	10.59	[illegible]
(Page 2)										
Chvi	12.49	12.53	13.74	13.81	15.59	15.72	9.79	9.84		

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83.C.[illegible].2.8-35

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Upland sage

Non-Permanent Transect # 15

Date 15 July 75

RDM 7/23

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	11.52	12.01	12.77	13.69	13.82	14.02	14.25	14.37	14.49	16.18
	16.29	16.42	16.95	17.43	17.63	18.11	18.46	18.80	19.92	20.00
	0.63	0.72	0.96	1.59	2.68	2.86	3.69	4.29	6.34	6.83
	7.08	7.18	7.39	7.42	7.63	7.74	7.91	8.03	8.41	8.50
	8.89	9.04	9.39	9.52	10.41	10.51	10.79	11.43	11.99	12.42
	15.74	16.30	17.02	17.65	17.90	18.30	19.37	19.47	0.00	0.28
	0.41	0.43	2.49	3.18	4.25	4.54	4.70	4.72	4.95	5.29
	5.87	5.89	6.19	6.21	6.46	6.72	6.88	6.91	6.98	7.21
	7.31	7.47	8.29	8.36	8.79	9.21	9.22	9.50	10.68	10.75
	11.68	11.89	12.20	12.58	12.73	13.42	14.15	14.52	15.12	15.65
	16.58	17.01	17.98	18.20	18.79	18.92				

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83.C.2.2.8-86

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 2

Vegetation Type Sagebrush Non-Permanent Transect # 16

T 25 R 99 S 10 1/4 1/4 S SE NW Transect Length 100m

Aspect (degrees) 270° Slope (degrees) 2° Elevation (feet) 7050'

Field Analyst(s) Ellis, Harding Date 15 Jul, 75

Site Description old burn, heavy grazing, [illegible] QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Art tr	14	3 2, RDM	73	9	64	55	69	? normal
2 Ch vi	20	3	6	8	19	44	27	
3 Pi ed	2	2	1	2	0	0	0	
4 Ju os	1	2	0	0	1	0	0	
5 Pu tr	24	5	0	0	0	1	0	browsed
6								
7								
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Ar tr	0.00	0.02	0.07	0.09	0.25	0.44	0.64	1.19	3.78	4.02
	4.20	4.80	5.60	5.94	6.27	7.21	9.21	9.47	9.67	9.71
	11.72	11.89	12.03	12.15	12.36	12.62	13.00	13.15	14.22	14.42
	15.32	15.36	17.90	18.60	18.85	20.00	0.00	0.02	0.15	0.46
	1.45	1.54	1.67	2.40	2.49	2.52	2.59	2.99	3.41	3.69
	6.89	7.75	7.86	8.09	10.85	10.93	11.11	11.33	11.92	12.02
	12.09	12.10	13.11	13.46	13.50	13.71	13.90	14.14	[illegible]	[illegible]
	15.54	[illegible]	16.0	16.17	17.82	18.71	0.55	0.74	0.89	[illegible]
	1.09	1.27	1.55	2.00	3.98	4.40	5.59	5.70	5.79	[illegible]
	7.20	7.41	8.35	8.50	10.60	11.19	16.55	16.83	17.81	[illegible]
	19.70	20.00	0.00	0.51	5.61	6.39	6.65	7.30	7.97	[illegible]
	8.20	8.29	8.37	8.41	8.50	8.92	8.96	9.68	10.42	[illegible]
	11.70	13.12	[illegible]	14.62	14.71	14.76	16.15	16.45	16.90	17.36
	18.20	18.32	18.37	19.17	19.58	19.72	19.95	20.00	0.00	0.27
Pu ②										
Ch vi	1.78	1.85	2.12	[illegible]	2.34	2.43	12.05	12.10	[illegible]	[illegible]
	[illegible]	[illegible]								

83.C.2.2.8-84

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Upland sage

Non-Permanent Transect # 16

Date 15 July 75

RDM 7/4.3

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	0.93	1.28	4.13	4.28	4.38	4.49	5.52	5.59	7.76	8.03
	10.38	10.45	13.80	13.91	14.00	14.01	15.13	15.78	16.00	16.30
	16.47	16.53	17.93	17.97	18.17	18.27	18.50	18.58		
Chvi	11.52	11.53	13.05	13.12	14.72	14.37	14.93	15.35	15.70	16.05
	4.12	4.49	5.51	5.59	6.70	6.72	14.32	14.45	17.60	17.76

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83.C.2.23-88

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Sagebrush - is this the same as "upland sage"?
Transect # 17
Type NON-PERM
T 1S R 100W S 13 1/4 1/4 S NENE
Transect Length 100 M
Aspect (degrees) 120
Slope (degrees) 4°
Elevation (feet) 7560
Field Analyst(s) Vovics and Handing
Date 16 July, 75
Site Description ?, RDM
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Pied	2	2 ?, RDM	0	1	0	0	0	PORCUPINES HAS [illegible]
2								
3								
4								
5								

Species	Intercepts (m) I1	I2	I1	I2	I1	I2	I1	I2	Trunk Diameter (cm) of Each Tree
Pied ...									
									Q1: ZERO
									Q2: 11
									Q3: ZERO
									Q4: ZERO
									Q5: ZERO

* [illegible]

83.C.2.2.8-81

LINE-STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 2

Vegetation Type Upland Sage
Non-Permanent Transect # 17
T 1S R 100W S 13 1/4 1/4 S NENE
Transect Length 100 m
Aspect (degrees) Q1-Q3: 120° Q4: 140°
Slope (degrees) 0-8°
Elevation (feet) 7560
Field Analyst(s) Vories and Hanning
Date 16 July 75
Site Description ?, RDM
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Syor	33	2. ?, RDM	39	8	9	4	4	[illegible]
2 Artr	14	3	78	91	55	66	85	
3 Amut	32	5	15	34	21	10	11	
4 Putr	24	5	3	0	1	16	18	
5 Chvi	20	3	0	16	30	56	37	
6 Pied	2	2	0	1	2	1	0	
7 Tetradymia canescens	31	2	0	0	6	0	0	
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	3.40	3.41	4.70	4.85	7.94	8.53	9.28	10.41	11.57	11.59
	17.47	17.63	17.75	17.91	18.23	18.49	18.79	18.94	19.28	19.45
	2.54	2.80	4.93	4.99	7.78	8.26	8.65	9.06	9.56	9.65
	10.29	10.32	13.18	13.49	14.27	14.54	14.96	15.03	15.77	15.83
	16.52	17.40	0.26	0.54	1.73	2.08	8.07	8.14	8.24	[illegible]
	8.50	8.53	11.34	11.43	11.55	11.61	14.70	14.82	17.92	18.97
	0.14	0.32	4.94	5.13	6.49	6.68	10.30	10.32	11.16	11.24
	12.12	12.49	16.98	17.25	18.12	18.43	18.58	18.69	4.08	4.10
	5.38	5.52	9.66	9.53	11.64	11.78	13.28	13.31	14.63	14.75
	14.58	15.81	16.63	16.83	17.05	17.21	17.35	17.70	19.75	20.01
Syor	0.00	0.22	5.52	7.16	15.00	15.33	16.68	17.18	17.25	17.41
	15.54	17.00	2.93	3.10	17.73	18.01	18.22	18.31	19.30	19.45
Amut	5.57	7.16	14.67	15.13	16.60	16.83	6.37	7.62	11.57	[illegible]
	16.39	16.91	3.93	4.11	4.27	4.69	0.96	1.10.	1.28	2.22
Chvi	15.50	15.63	7.86	7.89	7.77	8.06	9.19	9.21	14.03	[illegible]
	3.39	3.43	14.19	[illegible]	[illegible]	[illegible]	5.33	5.71	6.32	[illegible]

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83.[illegible]

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 2

Vegetation Type Upland sage

Non-Permanent Transect # 17

Date 16 July 7[illegible]

RPW 7/23

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr										
Arnt	3.83	3.90	7.44	7.55	8.01	8.36	18.42	18.46	18.70	19.29
	5.19	5.34	5.58	6.29	8.51	8.56				
[illegible]yor	19.80	19.85	19.96	20.00						
Putr	4.68	4.69	4.81	4.90	7.69	8.01	8.36	8.91	12.76	13.[illegible]
	8.61	9.66	9.87	10.37						
Chvi	16.76	16.81	16.86	16.87	17.51	17.57	18.46	18.50	13.68	13.77
	14.25	14.41	18.37	19.03	19.28	19.31				

83.C.2.2.8-91

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 3

etation Type Sage bottom Non-Permanent Transect # 18

T 1S R 100W S 13 1/4 1/4 S SWNW Transect Length 100m

Aspect (degrees) 240° Slope (degrees) 5° Elevation (feet) 7780'

Field Analyst(s) Vories and Harding Date 16 July 75

Site Description very moist sage bottom community QA Check RDM 7/03

adjacent to [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	3 ?. com	176	209	203	135	176	normal
2 Amut	32	5	15	8	6	2	6	|
3 Chna	19	3	27	22	23	67	52	|
4 Syor	33	4	156	131	85	86	83	|
5 Rice	42	5	2	0	0	0	0	|
6 Chvi	20	3	85	165	255	373	310	↓
7								
8								
9								
10								

Intercepts (m)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Syor	0.13	0.52	0.65	1.10	2.79	2.93	2.97	3.09	3.75	[illegible]
	4.32	4.94	9.53	9.56	9.58	10.77	10.81	10.87	10.92	11.42
	11.72	11.87	12.09	12.52	12.59	13.00	13.08	13.49	13.79	14.19
	14.28	14.35	15.20	15.42	16.08	16.11	19.43	19.70	19.95	[illegible]
	0.22	0.86	0.94	0.96	1.02	1.07	1.83	2.16	2.22	3.37
A.t.	0.90	1.03	2.81	2.86	5.49	5.90	5.86	5.96	7.39	7.42
	7.75	7.92	8.83	9.10	9.32	9.50	10.59	10.90	10.97	[illegible]
	11.21	11.73	14.65	14.74	14.78	14.80	14.94	15.19	16.76	17.11
	17.39	17.48	17.65	17.92	18.00	18.07	18.28	18.34	18.48	18.51
	0.00	0.21	3.35	3.53	3.65	3.73	5.30	5.32	5.39	5.81
	7.00	7.33	7.89	8.30	11.29	11.62	11.98	12.10	12.37	[illegible]
P t	1.12	2.71	7.97	8.55	18.37	18.42	9.08	10.30	17.29	17.[illegible]
Chvi	16.00	16.03	16.13	16.15	17.75	18.02	18.17	18.27	18.45	[illegible]
[illegible]	11.13	11.31	[illegible]	11.93	12.37	[illegible]	[illegible]	[illegible]		

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03.C.2.[illegible]

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 2 of 3

Vegetation Type Sage bottom

Non-Permanent Transect # 18

Date 16 July 75

Rlm 7/23

Species	Intercepts (m) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Syor	3.72	3.84	3.85	3.90	3.95	4.11	4.16	4.21	4.46	4.52
	4.83	4.92	5.05	5.06	5.12	5.26	8.58	8.60	8.75	8.93
	11.62	11.86	17.64	17.93	19.15	19.24	19.36	19.45	2.04	2.71
	3.96	3.99	5.39	5.71	6.23	6.91	9.52	10.08	10.18	11.25
	11.40	11.78	11.82	11.93	14.34	15.86	17.22	17.41	17.55	17.99
	0.25	0.40	0.79	0.89	7.90	7.97	8.26	8.56	9.87	9.96
	10.46	10.53	10.93	11.59	4.19	4.83	5.09	5.95	8.46	8.60
Artr	12.73	13.14	13.81	13.83	13.96	14.00	14.19	14.22	14.35	14.39
	15.09	15.33	15.92	16.04	16.51	16.59	16.72	16.89	17.00	17.44
	18.05	18.26	18.33	18.65	19.49	20.00	0.00	0.44	0.70	1.09
	1.79	1.90	1.95	1.97	2.84	3.18	3.38	3.62	3.39	5.02
	6.91	7.00	7.35	7.96	9.15	9.27	11.79	12.01	12.60	12.69
	12.70	12.90	12.95	13.00	13.14	13.39	15.44	15.47	15.68	15.70
	16.58	16.60	16.80	16.89	18.29	19.05	2.42	2.43	2.63	2.72
	3.06	3.14	3.19	3.21	3.79	3.86	4.14	4.49	4.57	4.78
	5.90	6.15	6.59	6.70	7.45	7.66	7.80	8.04	8.19	8.29
	8.39	8.46	9.33	9.42	9.52	9.59	9.65	9.83	10.03	10.09
	10.27	10.31	12.46	13.26	13.90	14.35	14.65	14.79	15.10	15.30
Amut										
Chvi	1.68	1.73	6.19	6.22	6.38	6.51	6.69	6.81	8.68	8.71
	11.91	11.96	12.59	12.67	14.53	14.76	17.93	17.95	18.70	19.15
	19.25	19.51	0.50	0.59	3.65	3.73	4.39	4.64	5.02	5.10
	5.81	5.82	6.20	6.23	7.04	7.06	8.88	8.95	9.02	9.09
	9.23	9.52	10.09	10.12	10.25	10.26	11.22	11.24	12.25	12.38
	12.57	12.59	16.71	16.80	16.97	17.04	18.57	18.69	19.55	19.63
Chna	3.37	3.40	3.54	3.71	5.64	6.31	10.30	10.57	6.02	6.11
	9.63	9.66	13.50	13.66	15.02	15.13	19.77	19.90	1.05	1.76
	1.38	1.40	1.50	1.74	6.39	6.50	11.96	12.15	12.26	12.33
[illegible]	19.72	19.77	17.96	20.00	0.00	0.15	0.59	1.00	2.08	2.10
	2.20	2.31	3.22	3.44	4.58	5.01	5.69	5.70	6.79	[illegible]

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LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

83.C.228-93

Project 83

Sheet 3 of 3

Vegetation Type Sage bolism

Non-Permanent Transect # 18

Date 16 Jul 75
RDM 7/23

Intercepts (m)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Chvi	7.08	7.11	7.22	7.43	7.72	7.74	8.14	8.16	8.90	8.94
	9.15	9.19	10.69	10.85	11.59	11.96	13.26	13.49	13.55	13.76
	15.62	15.73	15.89	15.96	16.04	16.21	16.65	16.89	18.05	[illegible]
	18.43	18.97	19.77	19.89	0.78	0.90	1.59	1.70	1.89	1.94
	3.63	3.76	3.81	3.94	4.05	4.07	4.95	5.10	6.20	6.41
	6.72	8.04	10.28	10.62	11.10	11.23	12.18	12.27	13.70	[illegible]
	15.13	15.20	[illegible]	[illegible]	17.57	17.74	17.87	19.55		
Artr	16.29	17.11	17.89	18.00	18.20	18.30	18.35	18.42	18.97	19.62
	0.43	0.60	0.90	1.76	1.73	1.82	2.08	2.10	2.68	2.83
	4.39	4.97	5.42	5.50	5.60	5.73	5.92	6.30	6.41	[illegible]
	8.69	9.33	9.55	9.69	10.94	11.11	11.23	11.30	11.30	11.91
	12.09	12.21	[illegible]	[illegible]	13.30	13.50	13.98	14.26	14.89	15.13
	15.20	[illegible]	[illegible]	[illegible]	17.44	[illegible]	17.90	18.36		
Chna	14.54	14.95	1.39	1.59	2.25	2.35	8.22	8.46	13.86	[illegible]
	16.91	17.57	17.72	17.76						
Gusa	11.93	12.05	12.60	12.74	[illegible]	[illegible]				

83.C.2.2.8-94

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 3

Vegetation Type Sagebrush — (bottomland ? or upland rom)

Non-Permanent Transect # 19

T 15 R 100W S 24 1/4 1/4 S ~~[illegible]~~ NENW Transect Length 100m

Aspect (degrees) 130 Slope (degrees) 7° Elevation (feet) 7610

Field Analyst(s) Vories and Harding Date 16 July 75

Site Description bottomland sage ok rom QA Check RMm 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chna	19	3 2, rom	53	53	33	26	27	[illegible]
2 Artr	14	3	139	92	114	194	88	|
3 Syor	33	4	84	95	74	26	1	|
4 Chvi	20	3	108	111	117	306	165	|
5 Amut	32	5	0	0	2	0	0	N
6								
7								
8								
9								
10								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Chna	0.18	0.28	1.47	1.87	4.19	4.27	5.09	5.21	5.28	5.31
	6.61	7.04	8.60	9.16	13.25	13.40	15.57	15.61	18.86	18.[illegible]
	1.79	2.04	2.48	2.64	2.85	2.86	5.62	5.69	7.18	7.22
	7.85	7.91	8.19	8.20	11.00	11.06	11.27	11.31	11.40	11.[illegible]
Artr	0.74	0.81	1.40	1.41	1.87	1.92	2.80	2.93	3.35	3.71
	5.32	5.59	6.73	6.86	7.18	7.26	8.22	8.31	8.55	8.[illegible]
	9.70	9.75	10.21	10.29	10.31	10.32	11.49	10.64	11.00	11.03
	11.25	11.51	12.35	12.41	12.56	12.70	12.77	12.89	13.40	14.[illegible]
Chvi	2.48	2.71	17.26	19.55	4.20	0.06	7.98	8.08	0.70	0.82
	4.25	4.33	8.40	8.43	13.14	13.23	15.79	15.85	17.05	17.[illegible]
	17.26	17.62	18.72	18.55	0.68	0.91	1.35	1.37	1.55	1.60
Syor	3.39	4.52	4.70	4.95	5.09	5.13	10.81	10.50	12.15	12.22
	13.80	13.91	14.09	14.20	14.55	15.05	15.11	15.19	15.[illegible]	[illegible]
	15.92	15.80	16.[illegible]	17.48	17.20	17.92	18.30	17.71	11.[illegible]	[illegible]
	1.[illegible]	3.[illegible]	4.10	6.[illegible]	[illegible]	[illegible]	[illegible]	5.11	[illegible]	[illegible]

GCI

83.C.2.2.3-75

1S 100W 24 NENW

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 2 of 3

Vegetation Type Sagebrush
Non-Permanent Transect # 19
Date 16 July 75
RDM 1/23

Intercepts (m)

Species	I1	I2	I1	I2	I1	I2	I1	I2	I1	I2
Avtr	15.24	15.46	15.82	16.10	1.03	1.11	8.18	8.27	8.35	8.44
	10.60	10.74	12.78	12.86	13.47	13.85	15.42	15.81	17.14	17.51
	17.64	17.83	18.29	18.37	0.43	0.58	0.90	0.92	0.98	1.01
	1.79	2.04	2.09	2.12	2.62	2.65	13.32	13.79	13.93	14.53
	15.48	15.53	1.12	1.26	3.09	3.46	3.87	3.88	3.97	4.26
	4.26	4.52	5.19	6.85	6.98	7.18	9.39	10.08	10.49	11.45
	12.19	13.85	15.70	16.31	17.30	17.32	17.81	18.03	18.53	18.90
Sagr	9.39	9.97	10.40	10.52	11.46	11.47	11.52	11.64	11.78	12.41
	12.51	12.34	13.03	13.25	13.90	14.12	16.08	17.30	17.55	[illegible]
	19.18	20.00	0.09	0.12	3.25	3.52	5.09	6.08	6.57	6.66
	9.33	10.80	11.48	11.51	15.91	16.31	17.68	17.96	5.60	6.93
	9.42	9.60	11.80	11.99						
Chna	12.07	12.10	15.32	15.38	15.89	16.07	17.89	18.29	18.62	18.83
	19.05	19.12	1.46	1.51	2.55	2.64	3.52	3.54	6.08	6.94
	8.54	8.72	9.03	9.21	10.80	11.47	14.53	14.75	15.50	15.75
	16.72	16.94	5.14	5.56	5.90	6.00	7.30	7.55	8.15	8.31
	13.85	14.30	2.85	2.88	5.69	5.96	13.75	14.42	15.50	15.87
	17.37	18.07								
Chvi	1.87	1.89	1.95	2.07	2.31	2.71	3.46	3.60	4.52	4.57
	4.70	4.59	7.75	8.00	11.50	11.54	14.50	15.12	15.15	15.46
	16.31	16.46	16.74	17.11	17.55	17.81	18.15	18.53	19.40	19.46
	19.60	20.00	0.00	0.31	0.84	0.90	1.81	2.20	2.60	2.85
	3.30	3.57	4.48	4.60	4.70	4.85	4.93	5.02	5.40	[illegible]
	6.19	6.20	6.55	6.73	6.90	7.08	7.35	7.54	10.68	[illegible]

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15 100W 24 NWNW

LINE STRIP DATA SHEET
SHRUB, TREE SEEDLING STRATUM

83.C.2.2.5-96

Project 83

Sheet 3 of 3

Vegetation Type Bottomland sage

Non-Permanent Transect # 19

Date 16 July 75

RDm 7/23

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr	0.60	1.26	0.65	0.74	5.54	5.69	7.90	8.79	10.88	11.1
	11.78	12.09	12.69	12.78	13.02	13.29	15.00	15.50	19.87	20.

83.C.2.3.8.97

1S 98W S19 NWSW

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type [illegible]

Transect # 1 (20)

Date 22, July 75

Varies / Baker

Permanent

Percent of Total · Each Species

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
yzopsis hymenoides	100	5		13		4		4		5		4										2
stragalus chamaeleuce	208	2	1	1					2	T											1	T
phaeralcea coccinea	181	2	19	6			2	T			2	1	1	T	2	T	4	1				
Physaria floribunda	175	2	3	1																		
[illegible] nuttallii	155	4	1	1																		
Phlox hoodii	209	2	1	1	1	T	4	4	4	5					1	T			4	4	7	8
[illegible]	269	4	1	1							1	T										
[illegible]	212	5				2		3				1				2		1				
Cryptantha [illegible]	184	2			12	4			15	6												
[illegible]	225	4			1	T																
Stipa comata	115	6						4		4		1		3		1						3
[illegible] longifolia	156	6					2	T					2	1			1	T	18	2		
Agropyron smithii	052	5										2		1		4		4		2		
Erysimum asperum	270	7											1	T								
Erigeron eatonii	230	7																	1	1		

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83.C.22.8-78

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Sagebrush
Transect # 2(21)
Type Perm
2S R 100W S 24 1/4 1/4 S SESE
Quadrat Size
Aspect (degrees) 340
Slope (degrees)
Elevation (feet) 7800
Field Analyst(s) Vories
Date July 15, 75
Site Description
QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Phlox multiflora	157	6	5	30			2	2	2	4	13	18										
Trifolium gymnocarpon	173	2-6	1	T	5	3			8	2	7	2	2	1	13	5	3	2	4	3	2	1
Penstemon caespitosus	103	4	3	1	6	3	6	6	2	2	2	1	10	14	9	2	1	1	5	4	3	2
Erigeron eatonii	230	6	1	T	1	T			1	T	1	T			1	T			2	1		
Poa secunda sandbergii	108	2		10		10		12		4		8		2		8		5		1		12
Phlox longifolia	156	6			5	1	1	T	3	T	6	1	3	T			5	1	2	T	2	1
Agropyron smithii	052	2		T		2		2		1				T		1		2				
Crepis accuminata	243	2	2	T	3	T					1	1										
Agoseris glauca ~~Crepis sp.~~	211	6	2		2	T	1	T	7	2			1	T			2	1			1	1
Lupinus caudatus	271	5			4	20			1	5	2	3	1	3	4	15	3	35	8	30	6	5
Zygadenus venenosus	159	2-6			1	T							1	1								
Unknown #1	383	3							1	T												
Cryptantha sericea	194	2									1	T										
Castilleja linariaefolia	266	2+4									1	T					1	1				
Oryzopsis hymenoides	100	2-4										3		3								
Castilleja chromosa	154	4											1	1	2	1						
Penstemon fremontii	272	3											1	1	1	1	[illegible]	6			1	2
Physaria floribunda	175	2											1	T								
Ipomopsis aggregata	273	2											1	T					2	1		
Stipa comata	115	5														1						
Sphaeralcea coccinea	181	2-4													2	1						
Poa pratensis? ~~fendleriana~~	107	2														[illegible]		5		1		
Poa fendleriana	212																					2
Erigeron pumilis	274																				1	1
Hedysarum boreale	174																				2	25

T2S, R1[illegible], S16, NE/[illegible]

83.C.2.2.8-79

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type [illegible]
[illegible]

Transect # 3 (22)
Permanent

Date 21 Jul. 75

Percent of Total · Each Species

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
[illegible]	271	3	2	3	2	2	2	2			2	2	2	2	1	1	9	12	1	2		
Eriogonum umbellatum	128	4	12	6	3	5	2	1			3	4			4	1	7	5	8	6		
Carex [illegible]	160	2		10		20		12		20		2		10		30		5		8		
[illegible]	083	2	11	4	32	10	5	1	11	3	11	3	34	8	6	2	71	10	31	8		
[illegible]	275	2	5	2					12	4			39	8								
[illegible]	052	2		2														4		2		
[illegible] columbiana	276	5		5		4		4				12		2		2		4		6		2
[illegible]	277	3	1	1																		
[illegible] fremontii	198	2	1	T							18	2							1	T		
[illegible]	084	3			2	7			1	4	3	5			2	2	3	1	1	2		
Achillea lanulosa	050	2			6	2			4	2	3	1										
Penstemon fremontii	272	3			2	1																
Clematis hirsutissima	217	2			1	1																
[illegible]	271	2					2	2														
[illegible]	280	4							7	4							4	5	14	7		
Bromus tectorum	067	5										4										
[illegible] sp.	166	4										3										
[illegible]	203	2									2	1										
Phlox [illegible]	156	4									4	1	1	T			1	T				
[illegible]	281	2									1	T										
[illegible]	282	4											1	1	1	1	1	1	6	5		
[illegible]	283	2															8	4			1	T
[illegible]	211	2 4															2	T				

83.C.2.2.8-100

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type SAGE BRUSH

Transect # 1 (23) Type Permanent

T 1S R 99W S 34 1/4 1/4 S SESE Quadrat Size

Aspect (degrees) 356 Slope (degrees)

Elevation (feet) 6660

Field Analyst(s) [illegible], [illegible]

Date 20 July 75

Site Description

QA Check

Quadrat Number

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
Total Percent Cover																						
Percent of Total · Each Species																						
[illegible]	273	2			2	T																
[illegible]	112	5						1						T		1		1				
[illegible]	054	2						T														
[illegible]	267	3						T														
[illegible]	175	5					1	T														
[illegible]	194	2					1	T	1	T												
[illegible]	199	4							1	T	1	T	1	T								
[illegible]	255	5							1	T			2	T								
[illegible]	251	2							1	T												
Bromus tectorum	067	4								1												
[illegible] fremontii	198	3							13	2	4	1	2	T	2	T			3	1		
[illegible]	090	2								T												
[illegible]	100	2										1				1				1		1
[illegible] + caespitosum	166	4										T		T		T				T		
[illegible]	284	2									1	T	1	T								
[illegible] asperum	270	7															3	1	1	T	1	T
[illegible]	052	2																	2	T		

C1

83.C.2.2.8-101

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Sagebrush Transect # 5(64) Type Permanent

125 R 99W S 8 1/4 1/4 S SESE Quadrat Size

Aspect (degrees) 340 Slope (degrees) Elevation (feet) 7200

Field Analyst(s) Voris, Ellis, Baker Date 14 July 1975

Site Description QA Check

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover			# %	# %	# %	# %	# %	# %	# %	# %	# %	# %
Percent of Total · Each Species												
Species	Code #	Phenology Code										
[illegible] sericea	144	6, 3, 2	2 T	2 T	1 1			2 1			1 T	
[illegible] [illegible]	230	5	5 1	3 T	4 2	11 4	8 3		4·2	2 T	4·2	8 3
Poa secunda Sandbergii	108	2	4	5	6	6	8	10	8	8	8	2
Poa fendleriana	212	6	6	2								12
[illegible] [illegible]	052	2	T	5	T				2	T	1	
Stipa comata	115	5	4									
[illegible] acuminata	243	6, 4, 2, 3	5 2	1 2		T	1 T	2 4		2 1		1 2
[illegible] [illegible]	156	7, 5, 3, 2	3 T		4 T	10 2			5 T	3 T	18·3	
[illegible] [illegible]	271	3, 7, 6	1 1				1 2		2 10		1 6	3 12
Trifolium [illegible]	173	3, 2		5 3		3 T	3 1	3 1	8·3	8 1	8 3	
Erysimum asperum VT	270	5			1 T							
Castilleja chromosa	154	5				1 2	1 1	1 1				
[illegible] [illegible]	054	2, 5				1		1				T
Koeleria cristata	090	2					2		1			
[illegible] pumillus	274	6, 5						2 3	1·T			
[illegible] [illegible]	285	2						1 T				
[illegible] [illegible]	181	2						2 1	1 T		4 2	7 3
[illegible] [illegible]	209	2							~~[illegible]~~	1 T		
Festuca idahoensis	207	2								T		

83.C.3.2.8-102

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Sagebrush
Transect # 6(25) Type permanent
15 R 98W S 30 1/4 1/4 S NESW Quadrat Size 1
Aspect (degrees) 150 Slope (degrees) Elevation (feet) 6420
Field Analyst(s) [illegible], [illegible]
Date 20 July 78
Site Description
QA Check /

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Sitanion hystrix	112	7		8		T		13		1		1										
Agropyron spicat.	052	5		2		1				2						25		30				
[illegible]	286	3	2	T	3	T																
[illegible]	198	3	1	1																	10	1
Descurain. pinnat.	255	2	7	1			5	T														
Lappula redow.	199	7	1	T																		
Elymus cinereus	200	2								6		3		30						5		5
[illegible] oth.	203	2							2	T	2	T					2	T				

83.C.2.2.5-103

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Sagebrush Transect # 11(26) Type Permanent

T 2S R 99W S 14 1/4 1/4 S SWNW Quadrat Size .5 m²

Aspect (degrees) 310 Slope (degrees) Elevation (feet) 6800

Field Analyst(s) Vories. Ellis. Baker Date 14 July 1975

Site Description QA Check

			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Lepidium sp (S11-7)	090	2	1	T			3	3	46	12	6	T	1	T	2	2	2	T	1	T	3	T
Chenopodium leptophyllum	226	3			4	T	3	T	2	1			2	T	4	T			1	T	2	T
Sitanion hystrix	112	6														T				T		T
Kochia iranica	265	2													1	1						
Chenopodium sp (S11-8)	070	2																	1	T		

LINE-STRIP DATA SHEET 83.C.2.2.9-9
MATURE TREE STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Shadscale Transect # 1 Type Perm

T 15 R 99W S 34 1/4 1/4 S SE.NW Transect Length 100m

Aspect (degrees) ~~[illegible]~~ 190° Slope (percent) <10% Elevation (feet) 8610

Field Analyst(s) Koehler Kertzel Date ~~[illegible]~~ 6/1/75

Site Description Sparcely vegetated hillside QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Juos	1	2		2		1	1	normal
2 Pied	2	2				2	2	〃
3								
4								
5								

Species	Intercepts (~~cm~~ m) I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (~~cm~~ inches) of Each Tree
Juos	19.73	21.07							10", 17.5"
Pied	4.10	5.19	7.92	9.08					

83.6.2.2.9-10

LINE STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

On tract

Vegetation Type Shadscale
Permanent Transect # 1

15 R 99W S 34 1/4 1/4 S SENW
Transect Length 100 m

Aspect (degrees) 190°
Slope (percent) 40%
Elevation (feet) 8610

Field Analyst(s) Koehler, Kestrel
Date 6/1/75

Site Description dry - eroded site
QA Check JAms

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Atco	16	2	42	32	53	12	26	normal
2 Arcatr	14	2	2	4	2	58	20	↓
3 Chvi	20	2	19	27	3	9	2	↓
4 Teca	31	2	6					↓
5 EPHE	21	2			1			↓
6 Save	29	2			24			✓
7								
8								
9								
10								

Intercepts (cm)

Species	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia	I_1	I_2	Dia
Chvi	4.20	4.30	.18	17.65	17.86	.09	15.10	15.55	.15	18.95	19.70	.52
	17.45	17.85	.41	0.35	0.45	.05	7.29	7.30	.10	12.80	12.91	.12
Atco	13.84	14.34	.27	17.9[illegible]	18.[illegible]	.43	19.90	19.95	.04	6.21	6.38	.19
	7.20	7.32	.07	10.92	10.99	.28	11.40	11.80	.32	11.95	11.96	.07
	13.25	13.48	.13	19.75	19.87	.21	0.64	0.72	.17	5.90	6.11	.47
	6.82	7.20	.39	12.55	12.69	.17	13.26	13.34	.05	13.58	13.74	.12
	17.83	18.07	.21									
[illegible]	[illegible]	[illegible]	.11									
Arcatr	9.81	10.93	.48	10.29	10.56	.34	10.68	10.97	.89	16.54	17.2[illegible]	.28
	17.30	19.00	.56	18.70	18.93	.12	19.70	19.56	.17			

1S 99W 34
SE NW

QUADRAT DATA SHEET 83.C.2.2.9-11
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Shadscale Transect # Y Date 6/1/75

Species Haplopappus	Code #	Phenology Code	1	2	3	4	5	6	7	8	9	10
Percent of Total · Each Species			NA									
Hasp nuttallii	87	2	.5	T					.5		.5	T
Erum Eriogonum umbellatum	128	2	T	T	2.5	2.5	.5			T	T	
DENO Oenothera caespitosa (K.W.) 9-8309		2	T				T	T				
Orhi Oryzopsis hymenoides	100	2						T		T		
Phlo Phlox	156	3		1	T							
GILI Gilia	85	2				1	T					
Sihi Sitanion hystrix	112	2						1.5				
Artr Artemisia frigida	186	2							.5			

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LINE-STRIP DATA SHEET 83.C.2.2.9-12

SHRUB, TREE SEEDLING STRATUM

Project 3.1

Sheet 1 of 1

Vegetation Type SHADSCALE

Non-Permanent Transect # 2

T 1S R 93W S 8 1/4 1/4 S NE|NW

Transect Length 100m

Aspect (degrees) 178°

Slope (percent) 53%

Elevation (feet) 6400

Field Analyst(s) Turner|Beck

Date 5/1/90

Site Description typical lowcrest [illegible] Quad 2

QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Artr	14	2	28	51	25	12	27	normal
2 ~~[illegible]~~		~~2~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~12~~	~~21~~	
3 Chna	19	2	19	6	1	2	2	
4 Chvi	20	2	3	6				
5 Teca	31	2	6					
6 Atco	16	2	5	50	24	11	21	
7 Anca (seedl.)	12	2		3				
8								
9								

Intercepts (cm)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Artr +5	5.79	5.90	13.07	13.50	14.07	15.00	15.47	15.85	15.85	16.10
	16.25	16.38	16.85	17.10	17.85	18.66	1.42	2.40	3.23	3.57
	3.67	3.73	5.55	6.97	7.23	9.27	9.80	10.31	10.65	11.40
	12.08	12.55	13.40	13.25	14.10	16.28	15.61	16.00	15.17	15.45
	17.50	17.35	18.35	18.47	19.70	20.71	0.30	1.32	1.85	2.30
	3.35	3.43	5.53	6.11	5.12	5.35	11.11	11.30	19.95	20.13
	0.36	0.75	1.03	1.16	5.20	5.60	11.42	11.55	15.35	15.65
Chna	13.55	13.80	8.97	9.30						
Atco	6.02	6.40	4.60	4.40	9.30	9.96	12.15	12.25	3.72	4.45
	8.10	8.32								
Artr	19.02	20.00								

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LINE-STRIP METHOD 83.C.2.2.9-13
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Shadscale
Permanent Transect # 3
15 R 99W S 25 1/4 1/4 S SWSW
Transect Length 100 m
Aspect (degrees) 145°
Slope (percent) 37%
Elevation (feet) 6650
Field Analyst(s) Voris, Koehler, Kautz
Date 6/13/75
Site Description Alluvial fan at base of sandstone outcropping dry south facing slope w/ mixed Atriplex & Artr. frigida
QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Art. tridentata	14	2	14	42	55	15	11	normal
2 Atriplex confertifolia	16	2	44	14		45	33	
3 Sarco vermiculatus	29	2	2	2	3	4	2	
4 Pinus edulis	2	2	1			1		
5 Atr. canescens	15	2	–	8	27	23	8	
6 Chry. viscidiflorus	20	2					3	
Chry. nauseosus	19	2					1	
8								
9								
10								

Intercepts ~~(cm)~~ meters

Species	I$_1$	I$_2$	Dia	I$_1$	I$_2$	Dia	I$_1$	I$_2$	Dia	I$_1$	I$_2$	Dia
Sarco. vermiculatus	0.30	0.40	1.10									
Atriplex confertifolia	7.10	7.21	.08	11.96	12.12	15	19.19	19.43	.32	4.20	4.27	7
	15.79	16.32	.42	11.55	11.72	.36	17.13	17.43	.25	18.20	18.24	.51
	18.50	19.02	.32	0.30	0.82	.31	7.10	7.19	5	16.90	16.95	5
Art. tridentata	0.98	1.00	.60	1.89	2.78	.54	12.65	14.12	1.00	19.64	19.83	.50
	1.38	2.86	1.40	5.53	6.04	.40	6.82	7.76	.72	19.32	20.94	.45
	1.01	1.56	.74	6.66	7.34	.52	16.10	16.14	.48	1.91	2.37	.57
	9.56	10.55	.75	11.80	17.16	.21	17.1[illegible]	17.60	.70	17.65	18.[illegible]0	.65
Art.	18.77	20.13	.69									
Atr. canescens	10.10	10.17	17	6.30	6.46	21	12.14	12.52	.37	16.79	17.13	.2[illegible]

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.3 mile

QUADRAT DATA SHEET 83.C.2.2.9-14
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Shadscale Transect # 3 Type Permanent

T 15 R 99W S 25 1/4 1/4 S SWSW Quadrat Size ~~[illegible] in.~~ .5m²

Aspect (degrees) 145° Slope (percent) 37% Elevation (feet) 6650

Field Analyst(s) Vories Koehler Kuettel Date 6/3/75

Site Description Alluvial fan at base of sandstone outcropping, dry south facing slope, [illegible] QA Check JCW

remains of old chimney at start

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		NA.										
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Orh.	100	2									1.5	
Chen. [illegible] fremontii	198	2	T		T	T						
Atr. frigida 553.1	186	2			.5			5.			5.	

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Syn!

83.C.[illegible]2.9-15

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Shadscale
Non-Permanent Transect # 4
T 1S R 99W S 11 1/4 1/4 S NW SW
Transect Length 100 m
Aspect (degrees) 75°
Slope (degrees) 15°
Elevation (feet) 6600
Field Analyst(s) Ellis, Baker
Date 11-[illegible]-75
Site Description Shale outcrop [illegible]
QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chry nauseosus	19	3 ? ?	6	6	0	0	5	? ? [illegible]
2 Chry viscidiflorus	20	3	3	0	12	15	23	
3 Tetradymia canescens	31	2	40	39	4	0	12	
4 Atriplex confertifolia	16	2	11	3	24	8	3	
5 Symp. oreophilus	33	2	2	0	0	0	0	
6 Eurotia lanata	22	3			8	~~8~~ 12	1	
7 Artridentata	14	3			10	~~8~~ 22	3	
8 Atriplex Canescens	15	2			3	~~4~~ 3	0	browsed
9 Sarcobatus vermiculatus	29	2				5	0	normal
10								

4-letter code? from

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Atriplex confertifolia	12.90	13.35	1.72	2.20	11.10	11.60	11.80	12.20	13.81	13.92
	2.63	2.87	17.50	17.35						
Sarc vermiculatus	18.92	19.45	19.69	20.00						
Chrysothamnus nauseosus	.21	.45	15.22	15.29						
E. lanata	5.19	5.32	5.53	5.63						
Te canescens	8.20	8.23	10.93	10.95	11.03	11.09				
Art tridentata	16.12	17.03	19.32	20.0	9.19	9.73	~~11.[illegible]~~			

83.C.2.2.9-16

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type Shadscale Transect # 1 (5) Type Permanent
15 R 99W S 34 1/4 1/4 S SENW Quadrat Size 1
Aspect (degrees) 190 Slope (degrees) Elevation (feet) 8610
Field Analyst(s) VORIES, BOYD Date 20 July 75
Site Description QA Check /

			Quadrat Number																			
			1/0		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Haplopappus nuttallii	155	4	1	3	2	1									1	4			1	3		
Eriogonum lonchoph	Mom 172	2	1	1	2	1	17	6	26	8	4	2					1	2	5	2	2	2
[illegible] cana	309	2	1	1							1	1	1	T								
Arenaria [illegible]	288	2					1	T														
Sphaeralcea coccinea	181	2									13	3			1	T						
Oryzopsis hymenoides	100	5												1				.1				
Plantago [illegible]	112	6												2								

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83.CO.2.9-17

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Shadscale Transect # 3(6) Type Permanent

T 1S R 99W S 25 1/4 1/4 S SWSW Quadrat Size .5m²

Aspect (degrees) 145 Slope (degrees) Elevation (feet) 6650

Field Analyst(s) [illegible] [illegible] Date 20 July 75

Site Description QA Check

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total Percent Cover																						
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Chenopod. Fremonti	133	3	7	1	1		3	1	8	2	4	T							2	T		
Oryzopsis hymenoides	170	2		T										T						3		
Sitanion hystrix	112	7		T																		
Cryptantha sericea	144	2																	1	T		

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83.C.J.2.10-6

LINE-STRIP METHOD
SHRUB, TREE SEEDLING STRATUM

Project 83
Sheet 1 of 1

2S 99W · S8 NENW

Vegetation Type HERBACEOUS BALD - MEADOW
Permanent Transect # 1
T 2S R 99W S 5 1/4 1/4 S NE NW
Transect Length 100m
Aspect (degrees) 290
Slope (percent) 15
Elevation (feet) 7450
Field Analyst(s) STATES/ELLIS
Date 1 June 75
Site Description
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat					Condition
			1	2	3	4	5	
1 [illegible]	002	2	-	-	-	1	-	[illegible]
2 Amelanchier [illegible] VT	032	2	-	-	-	1	-	browsed
3 Symphoricarpos vaccinioides	033	2	-	-	-	3	-	browsed
4 Artemisia tridentata	14	2	-	-	-	-	2	
5 Purshia tridentata	24	2	-	-	-	-	1	
6								
7								
8								
9								
10								

Species	Intercepts (cm)											
	I_1	I_2	(m) Dia	I_1	I_2	Dia M	I_1	I_2	Dia M	I_1	I_2	Dia M
[illegible]	1.85	2.13	2									
Amelanchier VT	2.6	5.71	2.75									
A. tridentata	15.70	16.[illegible]	.1	18.21	[illegible]	.30						
Purshia tridentata	16.76	17.21	.45									
24												

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83.C.D.D.10-7

QUADRAT DATA SHEET
HERBACEOUS STRATUM

on TRACT.

Project 33
Sheet 1 of 1

Vegetation Type ~~[illegible]~~ MEADOW Herbaceous Bald
Transect # I
Type PERM.
25 R [illegible] S 8
1/4 1/4 S NE NW
Quadrat Size .5m²
Aspect (degrees) 290°
Slope (percent) 15%
Elevation (feet) 7450
Field Analyst(s) STATES ELLIS
Date 1 June 75
Site Description
QA Check J Uso

col. 1 → 25%   15%?   Quadrat Number (%)

Species	Code #	Phenology Code	1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA —									→
Phlox multiflora	157	4	4.0	—		1.0	3			2		
Haplopappus acaulis	153	3	3.5	10.0	13.0			4		2	1.5	.3
Castilleja chromosa	154	4	T	T			T					
Haplopappus nuttallii	155	3	1.0	2.0	~~1.0~~	1.0	1	T		1		1
Phlox longifolia	156	3	T	T					T	T	T	
Koeleria cristata	090	2	2.0	1.0	1.0	T	3	1.5	T	T	1	1
Poa secunda sandbergii	108	2	4.0	T	~~X~~	1.0		1.0	.5		T	1
[illegible]	K.V. ~~060~~ 288	3	1.0	T	T		.5			.5		—
Gutierrezia sarothrae	127	2	T	—				.5		1		
Calochortus sp	158	2	T	—				T		T	T	
Astragalus sp	062	3	T	T	1.0			1.0		1	T	.5
Zygadenus venenosus ~~sp.~~ K.V.	159	3	T	—								
Lomatium [illegible]	165	2	T	—		T					T	
?Antennaria ~~[illegible]~~ sp.	58	2	T	—								
Arenaria ~~[illegible]~~ sp.	166	2	1.0	T	T	1.0	1	4		T	2	2
unknown #1	169	3	.5	—	T	1.0		T			T	T
[illegible] nelsonii	167	2	T	—								
Stipa sp.	114	2	.5	—				T				
Cymopterus sp	168	[illegible]	—	T				T				
Unknown #2	170	2			T			T				
unknown #3([illegible])	171	2				1.5						
Eriogonum [illegible]	172	2				T	T	T				
Penstemon sp	102	2				T					T	T
Trifolium gymnocarpon	173	3,4				.5				.5	1	
[illegible]	174	3					2					
[illegible]	175	2					T					
Unknown # 4	176	2						1.0				
Erigeron sp	77	3							T			
Lupinus sp	94	2							1.0			

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K.V.

QUADRAT DATA SHEET 83.C.2.2.10-8
HERBACEOUS STRATUM Ontract

Project 83
Sheet 1 of 1

Vegetation Type HERBACEOUS BALD
Transect # 2
Type NON-PERM
T 25 R 100W S 2 1/4 1/4 S NE NW
Quadrat Size .5 m²
Aspect (degrees) 135
Slope (percent) 9° S.W. (16%)
Elevation (feet) 7980'
Field Analyst(s) Pick, Ellis
Date 3 June 75
Site Description , Space [illegible] surrounded by [illegible] [illegible] [illegible]
QA Check J Arw

Species	Code #	Phenology Code	1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA →									
Hedysarum boreale	174	2	4	-	2	1	-	-	-	T	T	-
Koeleria cristata	90	2	1	1	-	T	-	T	-	-	-	-
Phlox longifolia	156	2,3	T	T	T	T	T	1	1*	-	.5	.5
[illegible] floribunda	175	2	T	T	1	T	-	-	-	T	-	T
Penstemon sp.	102	2	1	4	.5	1	-	-	2	-	1	1
Agropyron sp.	166	2	3	T	1	3	2	3	T	T	T	1
[illegible] acuminata Unknown #1 B2.2	~~177~~ 243	2	T	-	-	-	-	-	-	-	-	-
[illegible] acaulis #2 B2.3	~~178~~ 371	2	T	T	1	1	.5	-	-	2	-	T
Chrysothamnus viscidiflorus #3 B2.4	K.V. ~~171~~ [illegible]	2	T	1	-	-	-	-	-	-	-	-
Gutierrezia sarothrae	127	2	1	1	-	-	-	-	-	-	-	1
Astragalus ~~sp.~~ chamaeleuce K.V.	~~62~~ 208	2	T	1	T	T	1	.5	T	-	T	1
Poa sp	125	2	T	T	-	T	T	1	1	-	1	1
Solidago sp.	130	2	T	-	-	-	-	-	-	-	-	-
Haplopappus [illegible]	155	2	-	1	1	T	-	.5	1	1	1	1
Erigeron [illegible]	172	2	-	-	-	T	-	-	-	T	-	-
Lomatium ~~sp.~~ orientale K.V.	~~180~~ 313	3	-	-	-	-	T	-	T	-	1	T
Trifolium gymnocarpon	173	2	-	-	-	-	T	-	-	4	1	1
Sphaeralcea coccinea	181	2	-	-	-	-	-	T	-	-	-	-
Townsendia incana K.V. Unknown #4 B2.5	~~182~~ 130	2	-	-	-	-	-	1	-	-	-	-
Zygadenus ~~sp.~~ venenosus	159	2	-	-	-	-	-	-	-	T	-	-
[illegible]thamnus Unknown #5 B2.6	~~183~~ 020	2	-	-	-	-	-	-	-	.5	-	-

* yellow fungal spotting

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LINE-STRIP METHOD 83,6.2.2.10-9
SHRUB, TREE SEEDLING STRATUM
OFF TRACT

Project 83
Sheet 1 of 1

Vegetation Type MEADOW (BALD.)
Permanent Transect # 3
T 2S R 100 W S 4 1/4 1/4 S SW/NE
Transect Length 100 m
Aspect (degrees) 312°
Slope (percent) 13%
Elevation (feet) 8530
Field Analyst(s) Pick / Ellis
Date 6-3-75
Site Description open mead.-Chrysoth.-sparse-bare soil in spots
QA Check [illegible]

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chrysothamnus	36	2	-	12	27	21	-	NORMAL
2 depressus ?								
3								
4								
5 Artemisia	14	2	-	1	-	-	-	"
6 tridentata								
7								
8 Tetradymea	31	2	-	-	9	-	-	"
9 canescens								
10								

Intercepts (~~cm~~) meters

Species	I1	I2	Dia M	I1	I2	Dia M	I1	I2	Dia M	I1	I2	Dia M
Chrysothamnus	15.55	15.75	.08	15.93	16.03	.02	16.85	17.01	.04	1.20	1.32	.07
depressus ?	14.90	15.10	.05									
Artemisia trid.	0.00	0.30	.15									
Tetradymea												
canescens												

ck. depressus

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QUADRAT DATA SHEET 83.C.2.2.10-10
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type MEADOW (BALD) Transect # 3 Type Perm.

T 2S R 100 S 4 1/4 1/4 S SW/NE Quadrat Size .5 m²

Aspect (degrees) 312° Slope (percent) 13 % Elevation (feet) 8530

Field Analyst(s) [illegible] / Ellis Date 6-3-75

Site Description Ridge top - sparse veg QA Check [illegible]

Species	Code #	Phenology Code	1	2	3	4	5	6	7	8	9	10
Total Percent Cover												
Percent of Total · Each Species			NA →									
Koeleria cristata	90	2	5	T	4	3	3	1	1	8		5
Poa caespitosus sp. K.V.	103 ~~102~~	2	.5	4	1	.5	T	4	2	1	1.5	
[illegible] sp.	166	2	6	2	3	T	1	3	1	4	3	1
Lomatium orientale sp. K.V.	313 ~~[illegible]~~	4	T	1	T	T	-	T	T	1	1	T
Astragalus spatulatus sp. ① K.V.	292 ~~84~~	2	3	2	1	4	1	T			3	1
#A[illegible] [illegible]	155	2	T	-	-	1	.5	T			.5	T
[illegible] #1 B3.CN	185	2	1	T	2	T	-		1.0		1	3
[illegible] rigida	186	2	.5	.5	-	T	-			T		
Poa sp. #1	187	2	T	T	-	5	-	1			4	
Astragalus chamaeluce sp. ② K.V.	208 ~~[illegible]~~	" 2	-	.5	T	-	.5	T			T	T
Stipa sp.	114	" 2	-	1	-	-	1	-				
Eriogonum leucophyllum	172	" 2	-	1	T	-	T	-	1		T	T
Phlox longifolia	156	" 2	-	-	T	T	1	-	T	T	T	
Artemisia sp.	189	" 2	-	-	-	1	1	-	T	T		
~~[illegible]~~	~~[illegible]~~	" 2	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~					
Gilia sp.	85	" 2	-	-	-	-	1	-	T			
Gutierrezia sarothrae	127	" 2					4	-	1			
Linum lewisii	190	" 2					.5	-				
Erigeron sp.	77	" 2					T	-				
Trifolium [illegible]	173	" 2					.5	1	1	1	1	
Carex sp.	68	" 2						1				
Poa sp. #2	191	" 2							1			

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LINE-STRIP DATA SHEET 83.C.2.2.10-11

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

getation Type Hab. bald. Non-Permanent Transect # 4

T 2S R 100W S 34 1/4 1/4 S NE/NE Transect Length 100 M

Aspect (degrees) 260 Slope (percent) 12 %. Elevation (feet) 8420'

Field Analyst(s) Pick/Davis Date 6-4-75

Site Description very [illegible] area - exposed shale QA Check J Clar

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Tetradymia canescens	31	2	9	-	5	4	12	[illegible]
2 Art. tri	14	2	1	1	-	1	-	"
3 Chryso. ~~[illegible]~~? depressus	36	2		2	3	23	2	"
4								
5								
6								
7								
8								
9								

Intercepts ~~(cm)~~ M

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Tetra. can.	0.54	0.60								
Chryso. dep.	19.00	19.95								

83.6.2.2.10-12

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Herbaceous [illegible] Transect # 4 Type Pon-Fern

T25 R 100W S 34 1/4 1/4 S NE/NE Quadrat Size .5 m2

Aspect (degrees) 260 Slope (percent) 12% Elevation (feet) 8920'

Field Analyst(s) Pick / Ellis Date 6-4-75

Site Description [illegible] exposed [illegible] QA Check

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover		N/A	→									
Percent of Total · Each Species												
Species	Code #	Phenology Code										
Koeleria cristata	90	2	5	5	1	T	–	1	1.5	2	2	3
[illegible]	156	2	1	1	-	T	T	T	T	T		
[illegible]	127	2	4	.5	-	.5	T		T	-	.5	
[illegible]	186	2	1	1	1	-	-		T	-	1	T
Cryptantha fendleri	K.V. 314 ~~[illegible]~~	4	T	-	.5	T	T	T	T	T	T	T
[illegible] spathulatus K.V.	292 ~~[illegible]~~	2	.5	3	2	1.5	2	1	2	1.5	2	
Lomatium orientale K.V.	313 ~~[illegible]~~	4	T	-	-	-	-			-		
Poa sp.	125	2	1	.5	T	T	1	.5		T		
Hymenoxys acaulis K.V. 64.3	311 ~~[illegible]~~	2	3	T	-	.5	T	1	.5	-	.5	
Antennaria sp.	58	2	T	-	-	-	-		5			1
Penstemon sp.	102	2	1	1	-	T	1	1		-		
[illegible] sp.	166	2	T	1	1.5	5	-	5		1	1	1
Trifolium [illegible]	173	2	-	T	-	.	-			-		
[illegible]	155	2	-	-	.5	1.5	4	T	1	-		.5
[illegible]	172	2	.	.	-	-	T	-	1	-		1
[illegible]	175	3	-	-	-	-	.	-	-	-		.5

LINE-STRIP DATA SHEET 83.C.2.2.10-13

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Bald

Non-Permanent Transect # 5

T 7S R 106W S 14 1/4 1/4 S NW/SW

Transect Length 100 meters

Aspect (degrees) 276°

Slope (percent) 12°

Elevation (feet) 8050'

Field Analyst(s) Pick, Kohler, Kralick

Date 6-5-75

Site Description sparse veg. - [illegible], and bare soil

QA Check

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Tetradymia canescens	31	7	15	4	5	6	8	normal
2 Artemisia tridentata	14	2	1	1	1	1	1	"
3 Chrysothamnus depressus	36	2	3	8	9	–	–	"
4								
5								
6								
7								
8								
9								

Intercepts ~~(cm)~~ meters

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Tetradymia	6.61	6.76	2.84	2.93						
Artemisia tri.	3.20	3.50								
Chrysothamnus depressus										

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QUADRAT DATA SHEET 83.C.2.2.10-14
HERBACEOUS STRATUM

15°

Project 83

Sheet 1 of 1

Vegetation Type Bald Transect # 5 Type Non Perm

T 2S R 100 W S 14 1/4 1/4 S NW/SW Quadrat Size 100 m.

Aspect (degrees) 276° Slope (percent) 10% Elevation (feet) 8050

Field Analyst(s) Kochler Kestrel, P[illegible] Date 6/5/75

Site Description [illegible] bald surrounded by Amelanchier QA Check [illegible]

			Quadrat Number									
			1	2	3	4	5	6	7	8	9	10
Total Percent Cover	NA											
Percent of Total · Each Species												
Species	Code #	Phenology Code										
1. Trifolium gymnocarpon	173	2 & 3	T			.5		4.0	T			T
2. Lomatium sp	180	3	T	T		T	T	T		T		
3. [illegible]	127	2	1.0		.5	1.0	T	1.5	1.0	1.0	.5	
4. Achillea lanulosa	62	3	3.0			T		T		T	T	.5
5. [illegible]	175	3	T		T							T
6. P[illegible] secunda	108	2	3.0	3.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	2.0
7. [illegible]	194	2	T				T					
8. [illegible]	186	2	1.0	2.5			1.0	.5	T	1.0	1.0	
9. [illegible] umbellata	128	2	T	T								1.0
10. Poa sp	125	2	T				T	T	T		T	T
11. A[illegible] sp	166	2	T	T	T	T	T	T	1.0	T		T
12. S[illegible] sp	77	2	T									
13. [illegible] (~~Antennaria sp~~)	~~110~~ 311	2		T	T	T	T	T	T	T	.5	1.0
14. Koeleria ~~iranica~~	265 ~~190~~	2		T		1.0	T	1.0	T			.5
15. [illegible]	112	2		T	T					T	T	T
16. [illegible]	157	2			3.0							
17. [illegible]	87	2			.5					T		
18. A[illegible]	52						T					
19. [illegible] Arenaria fendleri	315 ~~97~~								1.0			1
[illegible] boreale	174							T	T			

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83.C.2.2.10-1.3

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type Bald

Transect # 6

Type NON PERM

T 2S R 100W S 27 1/4 1/4 S NESE

Quadrat Size 100

Aspect (degrees) 270

Slope (degrees) 0°

Elevation (feet) 8110'

Field Analyst(s) Varies + Harding

Date 18 July 75

Site Description Typical bald

QA Check RBM 7/23

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
Phlox longifolia	156	7	6	1	4	1	3	T	15	3	4	T	5	T	0	0	2	T	5	2	2	1
Astragalus spatulatus	292	6	5	5	1	1	3	3	3	2	10	5	6	3	8	3	10	5	5	3	3	1
~~Chrysothamnus viscidiflorus~~		~~2~~	~~4~~	~~4~~	~~3~~	~~6~~	~~6~~	~~5~~	~~6~~	~~9~~	~~13~~	~~12~~	~~5~~	~~5~~	~~6~~	~~6~~	~~3~~	~~3~~	~~2~~	~~2~~	~~4~~	~~3~~
Artemisia frigida	186	2	3	2	0	0	1	1	0	0	1	1	3	2	1	2	1	T	0	0	0	0
Poa secunda	108	7	—	8	—	8	—	6	—	3	—	4	—	2	—	0	—	0	—	0	—	1
Stipa comata	115	3	—	5	—	10	—	6	—	1	—	0	—	3	—	3	—	0	—	0	—	1
Ag smithii	52	2	—	11	—	0	—	1	—	T	—	5	—	0	—	0	—	1	—	1	—	0
Sphaeralcea coccinea	181	2	0	0	16	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hymenoxys acaulis	311	4	0	0	3	2	0	0	0	0	2	1	7	5	7	4	0	0	2	1	12	2
Penstemon caespitosus	103	6	0	0	1	T	2	1	5	4	4	1	0	0	2	2	0	0	1	T	1	T
Koeleria gracilis	90	4	0	0	0	0	0	5	—	4	—	1	—	2	—	1	—	10	—	2	—	6
Zygadenus venenosus	159	7	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trifolium gymnocarpon	173	7	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0	2	1	2	1
Physaria floribunda	175	2	0	0	0	0	0	0	2	T	5	T	1	T	4	1	0	0	2	T	1	T
Astragalus chamaeleuce	208	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Haplopappus nuttallii	155	2	0	—	—	—	—	—	—	—	—	—	—	—	—	→	2	1	0	0	2	T
[illegible]	361	5	0	—	—	—	—	—	—	—	—	—	—	—	—	→	1	T	0	0	0	0
Eriogonum lonchophyllum	172	3	0	—	—	—	—	—	—	—	—	—	—	—	—	→	1	2	0	0	0	0
Cryptantha sericea	194	2	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	→	1	T
Comandra umbellata	280	2	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	→	4	2

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Vegetation Type BALO

Non-Permanent Transect # 7

T 2S R 100W S 10 1/4 1/4 S SWSW Transect Length 100 m.

Aspect (degrees) 270 Slope (degrees) 15° Elevation (feet) 8473'

Field Analyst(s) Ellis / Baker Date 18 July 75

Site Description Very high in O. [illegible] QA Check KDM 7/23

Species	Code #	Phenology Code		# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Tetradymia canescens	31	2	3 rem	14	1	16	42	45	2, [illegible] 0
2 Chry. viscidiflorus	20	2, 3		8	13	33	7	23	
3 Eurotia lanata	22	2				1			
4 Artemisia tridentata	14	3					7	3	
5 Amelanchier utahensis	32	2					11	1	
6 Pinus edulis	2	2					1		
7 Syor	33	2					3	2	
8									
9									
10									

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Syor	7.16	7.30	9.48	9.57	10.33	10.70	18.65	18.83		
Amut	7.44	7.89	8.42	8.95	9.36	9.43	10.0	10.17		
T. canescens	18.72	18.89	5.03	5.21	5.89	6.00	8.54	8.70		
Artr	18.25	18.50								

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83.C.2

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83

Sheet 1 of 1

Vegetation Type BALD

Transect # 7 Type Non-Perm

T 9S R 100W S 10 1/4 1/4 S SWSW Quadrat Size .5m

Aspect (degrees) 270° Slope (degrees) 15°

Elevation (feet) 8473'

Field Analyst(s) Ellis/Baker

Date 18 July 75

Site Description Rolling, grassy, with open stand, m brush

QA Check RPM 7/23

the 4-letter abbreviation, if unique, would make this sheet more legible - especially after xeroxing! RPM

To use the 4 letter code correctly requires the use of a code book in the field + NO code book covers all of the species found in this area. Also spelling the species names is an excellent training tool so that field personnel will learn the plants correctly. It also eliminates errors made by illegible four letter codes. Data sheets need to leave more space for species name to improve legibility after xeroxing. RPM

Total Percent Cover

Percent of Total · Each Species

Species	Code #	Phenology Code	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
chrysls Spatulatus	292	5,6	5	5	+		+		+						-							
Hymenoxys acaulis	311	5	5	2	6	2	2	1	8	1	1	T	3	T	2	T						
Artemisia frigida	186	3	2	1	2	2	1	1	+		1	1	3	1	-		2	2	1	T	1	1
Agropyron smithii	52	2		1	+		+		+						-							
Agropyron trachycaulum	54	2		1		6		1		2		4		2		6		T		8		10
Koeleria gracilis	90	2		1		1		3	+			3		2		1						
Erigeron lonchophyllum	172	3	2	1	+		5	4	1	T			2	3	-				2	3		
P[illegible]anda	108	2		2	+			1		2		4		4		1						
Oxytropis lambertii	101	2,4	1	T	2	1	+		1	5					4	4						
Gutierrezia sarothrae	127	2,3	1	T	2	1	5	2	+		2	5			1	T			R	T	1	2
Astragalus chamaeleuce	208	2,5,6	2	T	2	T	1	T	2	1	2	1	2	1	2	T			1	T		
Phlox longifolia	156	5	1	T	+		+		+				2	T	5	1						
[illegible] carinatus	103	4	-	3	5	3	2	1	5	1	3	1	4	2	2	2	1	T	2	1	2	T
[illegible] floribunda	175	2 (rosettes)	+	T	1	T	+		-		1	T	-		1	T					4	T
[illegible]	173	2					1	1	+						-							
[illegible] boreale	174	5					1	1	+				5	8	1	1			7	5	4	6
~~[illegible]~~		~~1~~							~~3~~				~~2~~		-							
Haplopappus nuttallii	155	3							5	1	1	T			-							
[illegible] Umbellata	280	2							1	T					-							
[illegible]sdesmia sp.	363	3							3	1	1	T			-							
[illegible] septentrionalis	56	5							2	T	1	T			-		2	T			1	T
Euphorbia robusta	244	4							~~+~~		1	T			-							
Castilleja [illegible]	266	4,3											2	3	3	3	2	1				
[illegible] bulbosa	50	2															3	T				
[illegible]isii	190	3															3	T	5	2	2	1
[illegible]	212	7																15				3
[illegible]	194	2															1	T				

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83.C.5.5.10-15

LINE-STRIP DATA SHEET
MATURE TREE STRATUM

Project 9.3

Sheet 1 of 1

Vegetation Type BALD
Transect # 8
Type Non Perm.

T 25
R 99W
S 18
1/4 1/4 S NW/NW
Transect Length 120 m

Aspect (degrees) 220°
Slope (degrees) 6°
Elevation (feet) 7600'

Field Analyst(s) Ellis, Baker
Date 18 July '75

Site Description On herb sheet 2. RPM
QA Check RPM 7/23

Species	Code #	Phenology Code	1	2	3	4	5	Condition
			# in each 6 x 20 m quadrat					
1 Pinus edulis	2	2 2, RPM	0	1	2	0	0	browsed
2								[illegible] line
3								
4								
5								

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	Trunk Diameter (cm) of Each Tree
	Intercepts (m)								
Pinus edulis									Q_2: 27
									Q_3: 12, 22

83.6.2.3.10.17

LINE-STRIP DATA SHEET

SHRUB, TREE SEEDLING STRATUM

Project 83

Sheet 1 of 1

Station Type BALD Non-Permanent Transect # 8

T 2S R 99W S 18 1/4 1/4 S NW NW Transect Length 100m

Aspect (degrees) 220° Slope (degrees) 6° Elevation (feet) 7600'

Field Analyst(s) Ellis Baker Date 18 July '75

Site Description ——— QA Check RDM 7/23

Species	Code #	Phenology Code	# in each 6 x 20 m quadrat 1	2	3	4	5	Condition
1 Chvi	20	2,3	5	4				[illegible]
2 Tetradymia canescens	31	2	5	0	1			
3 [illegible]	22	2 ?, [illegible]		2				
4 Pinus edulis	2	2		1	1	1	–	
5 [illegible]	32	2			8		1	
6 [illegible]	14	3			5		3	
7 [illegible]	1	2					1	
8								
9								

Intercepts (m)

Species	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2
Pinus edulis	1.80	1.89								
Chvi	3.08	3.12	13.90	14.18						
[illegible]	4.91	5.55								

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QUADRAT DATA SHEET
HERBACEOUS STRATUM

Nr USGS

Project 83

Sheet 1 of 1

Vegetation Type Benchmark Bald (Meadow) Transect # EB Type Non Perm

T 25 R 99W S 18 1/4 1/4 S NWNW Quadrat Size .5 M

Aspect (degrees) 220° Slope (degrees) 6° Elevation (feet) 7600'

Field Analyst(s) Ellis, Baker Date 18 July 75

Site Description narrow bald area between Shale & PJ and MB QA Check RDM 7/23

			Quadrat Number																			
			1		2		3		4		5		6		7		8		9		10	
Total Percent Cover			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Percent of Total · Each Species																						
Species	Code #	Phenology Code																				
nerapappus filifolius	289	4	2	4	7	10	3	10	1	1	7	10	4	10	5	12	6	6	4	1	9	10
mendra umbellata	280	6, 5	2	3	4	4	+		8	4			T				+		+		+	
plantus cordatus	290	5	1	.5	-		+		+				+				1	T	3	T	+	
plopappus nuttallii	155	3, 4	3	1	4	1	2	T	+		2	1	+				3	1	1	T	2	T
Stipa comata	115	4, 5		1	-			T	+				+				+				+	
stemon caespitosus	103	4, 5	3	4	4	2	2	1	1	T	3	1	3	4			9	5	1	2	+	
stragalus chamaeluce	208	2	2	.5	-		1	T	2	T			+				+		1	T	1	T
um alatum	79	2,3,4,5	3	2	4	5	1	T	-				2	1			1	1			+	
longophyllum	172	3	5	5	1	T	+		1	5			+		1	T	1	1			+	
ryzopsis hymenoides	100	5, 6		1	-		+		1	T			+				+					1
rum trachycaulum	54	2		1	1	1		2		1		T		6		4		2		T		
Poa secunda	108	2		T	-			T		T							+					
Astrag. spatulatus	292	6			2	.5	5	3	4	T	2	1	+				+		1	T		
aulis	311	4			2	T	7	1	4	1	5	1	12	1			1	T	21	4	17	3
Koeleria gracilis	90	2						T		T			+					1				
lium agregata	363	2					4	T	+				+				+					
Phlox longifolia	156	5					1	T	+				+				+					
nothera lacundifolia	364	5					1	T	+								2	3				
omus tectorum	67	6								1							+					
tiervezia sarothrae	127	2									3	7					+					
doxylon pungens	134	2											1	T			+				12	5
haplopappus acaulis	153	2											3	1			+					
godesmia sp.	362	3													1	T	2	T	1	T		
usia floribunda	175	2 (roselle)															1	T	1	T	3	1
bia robusta	244	2																	2	T		
rex sp.	68	2																		10		.5

T2S, R97W, S8, NE/NW

83.Q2.2.16-21

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

Vegetation Type BALD [illegible]/BENCH
Transect # 1 (9) Permanent
Date 21 JULY 75

Percent of Total · Each Species

Species	Code #	Phenology Code	Quadrat Number 1		2		3		4		5		6		7		8		9		10	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
[illegible] hirmosa	154	7	3	1	1	T	—		—		—		—		—		1	1				
[illegible]	209	2	6	2	—		1	T	7	2	2	2	—				1	1				
[illegible]	292	6	14	2	18	2	3	1	8	2	2	1	[illegible]	T			4	1			1	T
[illegible] acaulis	153	6	4	3	10	8	11	20	2	4	—		1	T	4	6	3	2	5	4	4	3
[illegible]	155	4	3	2	5	1	—		4	1	6	2	3	1			23	5	5	2	23	7
[illegible] trachy.	054	2		1		1		1		2		2		5		T		2		4		5
tipa comata	115.	2		2		1		2		2		3		3		4		1				
[illegible] secunda	108	7		2		T		T		T	—			1			—			1		
rigeron eatonii	220	2	6	1	1	T	—		—		—		—		1	1	—					
Physaria floribunda	175	2	1	T	1	T	—		—		4	1	1	T			1	T	2	T	2	T
[illegible]	288	4	1	T	2	1	4	1	1	T	8	2	—		3	1	5	1	1	T		
[illegible]	173	2			1	T	—		1	1	—		—				2	T	3	1		
[illegible]	202	2			1	T	1	T	3	1	—		2	1			—		1			
hlox longifol.	156	7			5	T	—		—		—		9	1			3	T	4	T		
ygodesmia juncea	310	2					4	1	—		—		4	1			—					
ymenoxys acaulis	311	6					7	1	3	1	—		1	1	13	2	—		8	1	8	2
[illegible] caespit.	103	2					2	T	—		—		—				—		4	1	5	1
[illegible]	174	6					1	1	—		2	1	—				—					
[illegible]	172	5							2	1	2	2	4	1			—					
[illegible]	181	6									3	1	—				—					
[illegible]	260	6											7	2			—					
[illegible]	271	2											1	T			—					
[illegible]	127	2											3	1			5	2				
[illegible]	273	2													3	T	—					
[illegible]	100	2														T		1				
[illegible]	207	2														T	—					
[illegible] gracilis	020	2																		1		2
[illegible]	285	2																	1	T	1	T

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T?S, R??W, S?, SW/4S 83C.22

QUADRAT DATA SHEET
HERBACEOUS STRATUM

Project 83
Sheet 1 of 1

etation Type PMD Transect # 3 (10) Date 21 July 75
[illegible] / [illegible] Dominant

Percent of Total · Each Species

Species	Code #	Phenology Code	Quadrat Number 1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	7 #	7 %	8 #	8 %	9 #	9 %	10 #	10 %
[illegible]	054	4		10		4		3		2				6								2
[illegible]	090	2		12		10		1		4		1		3				2		6		10
[illegible]	108	6		2						1		2		2		4		2		1		
[illegible]	184	2	3	1	3	2			4	1					1	T	2	2	2	2	3	2
[illegible]	103	2	6	4	9	6	7	3	6	2	3	1	7	6	12	7	7	4	5	3	1	1
[illegible]	292	6	8	4	10	5	13	5	11	6	2	3	3	2					6	5	8	2
[illegible]	155	4	2	1					2	1	2	2	7	4	1	T			5	2	2	2
[illegible]	311	5	-		3	1	18	1	8	3	2	1			10	5			17	6	8	5
[illegible]	208	2			1	1							3	3			1	T	2	T		
[illegible]	156	6					3	T	3	T	3	1			5	1	4	1				
[illegible]	207	7								4		5										
[illegible] (P[illegible] [illegible])	257	2							3	4	1	1			2	4	1	1				
[illegible]	139	6									4	5										
[illegible]	172	2							2	T	1	T	4	3	2	3	2	2	3	2		
[illegible]	273	2									10	4	2	1	3	1						
[illegible]	101	5									1	1										
[illegible]	002	2										1				4		16		T		1
[illegible]	074	6									1	1										
[illegible]	172	2									3	1			1	1			5	4	1	2
[illegible]	175	2											3	T								
[illegible]	127	3													1	2			1	1		

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2.3.2 Grazing Exclosures

2.3.2 Grazing Exclosure

2.3.2.1 Introduction

The grazing exclosure established on Tract C-a is designed to demonstrate and monitor vegetation responses to the exclusion of particular groups of grazing or browsing herbivores. Various forage species can be expected to respond to protection according to their positions in the hierarchy of consumer preferences. Thus, the most desirable components of the plant community should react most dramatically to a release from the restraints exercised upon them by herbivores.

Both quantitative and qualitative study techniques, plus photoplots, will be utilized to measure these responses. All techniques, however, will focus on the incremental forage production resulting from the degree or quality of protection being afforded.

Careful evaluation of data obtained during this study should reveal several important aspects of ecosystem interactions. It may be possible to determine plant species preferences for each class of herbivore. Determination of the relative importance of individual plant species to wildlife and to domestic and feral livestock will facilitate the definition of priorities for reestablishing plant species after disturbance. The protected exclosure will serve as a basis for comparisons to similar communities outside the exclosure, providing a means for improving carrying capacity evaluations and land management decisions in the region.

2.3.2.2 Methods

2.3.2.2.1 Exclosure Design and Sampling Technique

An exclosure has been situated on Tract C-a in the southwest quarter. Dominant browse species on the exclosure site are sagebrush (Artemesia tridentata) and bitterbrush (Purshia tridentata); snowberry (Symphoricarpos oreophilus) and serviceberry (Amalanchier utahensis) are faily common in the area.

Substantial use by livestock and wildlife was evidenced by browse condition and density of fecal groups at the site. The exclosure encompasses 1.21 ha (3 A) measuring 190.9 m (626 ft) x 63.6 m (208.7 ft) (Figure 2.3-5). The exclosure contains three compartments or sections, constructed to prevent access by particular groups of herbivores (National Academy of Sciences - National Research Council, 1962). The largest compartment contains 0.61 ha (1.5 A) and is constructed of standard 4-strand barbed wire fence (with a wooden rail as the top strand) on three sides of the compartment. This compartment excludes domestic livestock and wild horses but allows free access to big game able to leap the fence and small wildlife that can enter through or under the wire. The other one-half of the exclosure is constructed

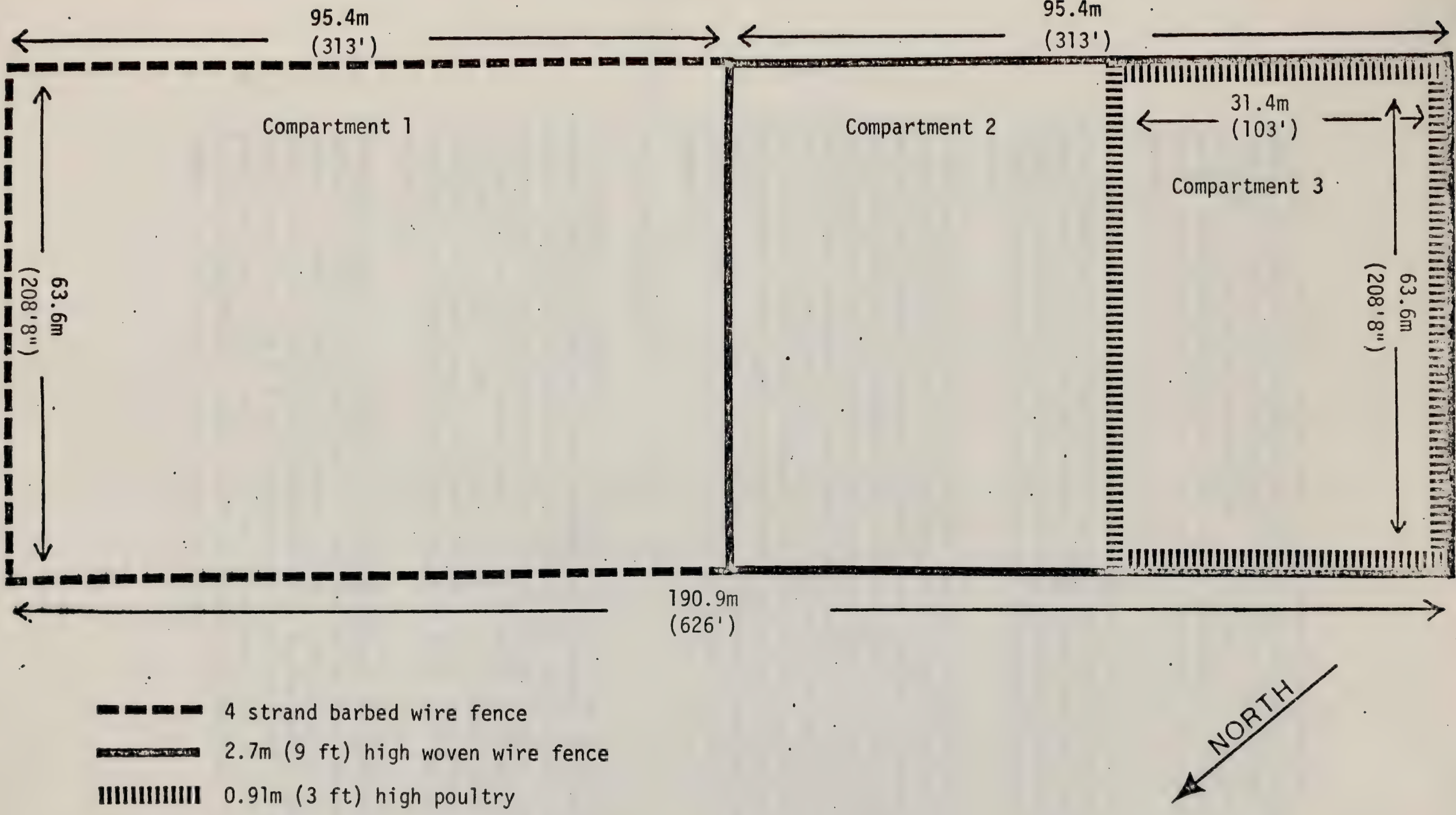
95.4m
(313')
95.4m
(313')
Compartment 1
Compartment 2
Compartment 3
31.4m
(103')
63.6m
(208'8")
63.6m
(208'8")
190.9m
(626')
4 strand barbed wire fence
2.7m (9 ft) high woven wire fence
0.91m (3 ft) high poultry
NORTH

Figure 2.3-5. Design of the grazing exclosure used for RBOSP.

of 2.74 m (9 ft) high woven-wire. The second compartment, located within this half and enclosing 0.4 ha (1 A), excludes big game and livestock, but not smaller mammals. The third compartment, 0.2 ha (0.5 A) in size, with the addition of 0.81 m (3 ft) poultry wire buried to a depth of 25.4 cm (10 in) is designed to prevent entry by all mammalian herbivores, including lagomorphs and other small mammals.

In addition to the three compartments within the exclosure, one study area commensurate in size to the largest exclosure compartment is established outside the exclosure. This comprises the control or "non-treatment" plot subjected to normal foraging pressures. The site is contiguous to the exclosure and permanently marked by metal stakes.

A minimum 7.62 m (25 ft) buffer zone between the fence and sampling areas is strictly observed in an attempt to reduce several of the prejudicial factors inherent in exclosure studies. Fences intercept precipitation and accumulate snow drifts, significantly altering soil moisture conditions below and adjacent to them. Site disturbance during fence construction may have long-lasting effects. The fences can affect light conditions, soil conditions, and seed dispersal, and thereby, plant establishment and distribution patterns. Sampling is undertaken once each year near the completion of the growing season in late July or early August. Different sampling techniques are implemented for each of the three principal strata of the plant community.

2.3.2.2.1.1 Grass-Forb Stratum

This stratum is sampled by a combined ocular estimate - clipped plot method (adapted from National Academy of Sciences - National Research Council, 1962) on a permanent grid. Size of the grid and numbers of samples are commensurate with the size of the exclosure compartment. In the 0.2 ha (0.5 A) compartment, a 15.24 m (50 ft) x 30.48 m (100 ft) grid is established. In the 0.4 ha (1 A) compartment, 30.48 m (100 ft) grids are used. In the 0.61 ha (1.5 A) compartment and on the external (control) plot, grids measure 45.72 m (150 ft) x 30.48 m (100 ft).

Permanent grids are centered in each compartment by locating each corner via cross-sightings with a transit and a tape measure. Each corner is then marked with a metal stake. The number of sample plots within each grid is directly proportionate to the compartment (and grid) size. In the 0.2 ha compartment, there are 5000 possible sample points; 10,000 in the 0.4 ha compartment and 15,000 in the 0.61 ha compartment. Sample plot locations are assigned a coordinate number in feet according to column and row.

Prior to actual sampling, one percent of all possible sample points is selected from random number tables. This number of samples should constitute a statistically representative proportion. Thus, there are 50 sample points in the 0.2 ha, 100 in the 0.4 ha, and 150 in the 0.61 ha compartment.

Sampling plots are located by the following procedure: A reel-type tape is stretched along the southwestern edge of the grid. Columns are located along this baseline tape. Rows are located by stretching another tape at a right angle to the first, using a transit to maintain a perpendicular position. This procedure locates the sample points for the observer. A rectangular quadrat frame is then placed at that point.

The rectangular quadrat shape was selected because it is widely regarded by quantitative plant ecologists as the most accurate plot shape (Kershaw, 1966; and Grieg-Smith, 1964). "Comparative studies have shown that relatively long plots are more efficient than isodiametric plots as sampling units, especially when some of the elements of the vegetation are highly aggregated in their occurrence patterns," (Cain and Castro, 1959). The quadrat size [0.15 m (0.5 ft) x 0.59 m (1.92 ft)] was selected because its area, 0.09 sq m (0.96 sq ft) is amenable to conversion to a per acre basis (grams/plot x 100 = lbs forage/acre), or to a per hectare basis (grams/plot x 113 = kg forage/ha).

After a short training period, during which repeated ocular estimates followed by clipping comparisons are made until acceptable reproducibility of results is achieved, a trained observer orients the quadrat frame lengthwise along the row tape with its northern-most corner at each sample point, then ocularly estimates the green herbage (grass and forbs only) in grams and records an estimate on a standard field data form (Figure 2.3-6). At one randomly selected plot out of each five, the herbage is clipped and weighed with a hand-held spring scale. All plot clippings are recorded and converted to kg/ha dry weight.

When sampling is completed, clipped and ocularly estimated plot weights can be compared to obtain a "correction factor", which, when multiplied by the ocular estimate, yields the "corrected" weight. When, for example, clippings have a mean (or total) weight that is 12 percent higher than ocular estimates, each plot estimate is "corrected" by multiplying it by 1.12. Corrected estimates of each grid can then be averaged to obtain a green herbage production estimate.

A further "correction factor" is applied to convert "green forage weight" figures to "dry forage weight". Bags of clippings are marked for identification and transported to the ECI laboratory. Clippings are "oven-dried" in a Thelco oven at approximately 70°C for at least

OCULAR ESTIMATE - CLIPPED PLOTS FOR GRASS-FORBS

Project____________________ Site______________________________ Date____________

Observer____________________ Page______ of ______

Ocular Estimate	Clipped Weight	Ocular Estimate	Clipped Weight	Ocular Estimate	Clipped Weight	Ocular Estimate	Clipped Weight
1		26		51		76	
2		27		52		77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16		41		66		91	
17		42		67		92	
18		43		68		93	
19		44		69		94	
20		45		70		95	
21		46		71		96	
22		47		72		97	
23		48		73		98	
24		49		74		99	
25		50		75		100	

Figure 2.3-6. Data sheet for recording ocular estimates and clipped weights of the grass-forb stratum for RBOSP.

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24 hours. Bag contents are then weighed and these weights compared to the undried weights. A mean of the proportions thus obtained is then applied to all plot estimates to yield "dry weight" forage production.

2.3.2.2.1.2 Shrub Stratum

It is necessary to use qualitative rather than quantitative sampling techniques on the shrub stratum. Quantitative measurements of browse production would require herbage removal on shrubs within the exclosure. This would introduce extreme bias because of the limited number of browse plants occurring within the sample area. Clipping would thus reproduce the impacts the exclosure is designed to negate, such as concentrating growth hormones in clipped areas of the plant, altering growth forms, and causing other negative side-effects.

It becomes necessary, therefore, to utilize methods which yield useful relative and qualitative information but cannot provide net production data. The method chosen is to locate a .004 ha (1/100 A) circular plot in the center of each grid. The disadvantages inherent in the shape of the plot are mostly offset by the large size of the plot in proportion to the grid area; a larger percentage of the area is sampled (Cain and Castro, 1959).

A stake is driven in the center of the permanent grid and another near the perimeter of the plot to mark a starting point. A full circle is then circumscribed with a 3.6 m (11.8 ft) radius. Every shrub rooted within the plot is recorded on a field data form (Figure 2.3-7) to species, maximum height, mean crown diameter, percent of the canopy that is alive, and percent of the plant available to a potential browsing animal.

Maximum shrub height is measured with a pocket tape and recorded in centimeters as the greatest distance of live portions of the plant from ground level. Mean diameter is the average of the greatest and least diameters of the shrub and is also measured with a pocket tape placed horizontally at the level of maximum canopy development. Percent of the shrub which is alive and percent available as browse are both ocular estimates.

2.3.2.2.1.3 Tree Stratum (Pinyon-Juniper Canopy)

The tree canopy need be measured only at the beginning and end of the study period or at infrequent intervals if the study is of long duration. The simplest procedure available is to measure the canopy intercepting a line which traces the perimeter of the established grass-forb grid. Tapes are stretched between corners of each grid and the distances of canopies intercepting those tapes recorded by species.

DATA SHEET FOR 0.004 HECTARE SHRUB PLOTS

Project________________________ Site____________________ Date______________

Observer(s)____ Page ______ of ______

Species	Maximum Height	Mean Crown Diameter	Percent Alive	Percent Available	Remarks

Figure 2.3-7. Data sheet for 0.004 hectare shrub plots for RBOSP.

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The importance of pinyon and juniper as a component of wintering mule deer diets has not been adequately established. Many researchers credit the species with providing large quantities of browse during critical winter periods (Ron Krager, 1974. Personal Communication). The appearance of pinyon and juniper trees in the Piceance Basin seems to support this supposition.

Many large trees are browsed to a uniform height (high line level) of about 1.83 m (6 ft). The importance of these species will be reflected in a minor change to the standard line-intercept procedure implemented to measure browsing effects on pinyon and juniper. Canopy intersecting the line that is less than "high-line level" or 1.83 m high (De Vos and Mosby, 1971) will be recorded separately (Figure 2.3-8). The proportion of lower canopy can be expected to increase in the protected compartments of the exclosure if those plants are ordinarily browsed heavily by deer.

2.3.2.2.2 Photoplots

"Photographic plots provide a visual record of change or lack of change in the vegetation cover. They are useful for illustrative purposes but in themselves do not provide a quantitative measure of the vegetation. When used in conjunction with quantitative methods, they become valuable records", (National Academy of Sciences - National Research Council, 1962).

At the exclosure, up to three individual shrubs of the major browse species (sagebrush and bitterbrush) present are selected for photographic documentation in each sample grid (ideally for a total of 12 individuals/species at the exclosure site). Plants selected are healthy and of medium size. During the first photo-sampling season, shrubs are permanently marked.

A white-painted plywood sheet marked with a one-inch grid of black lines and cut in two and hinged to facilitate handling, is used as a backdrop for photographing each shrub (modified from Springfield, 1974).

In the first season, photoplots are permanently located by driving rebar stakes at points directly below the camera and at corners of the backdrop sheet. In succeeding years, plots are relocated and rephotographed by use of those reference points. Photographs are taken each year unless comparison of the first two years' photographs indicate that extended sampling intervals would be more efficient. Sampling is timed to correlate with the important phenological stage of the shrubs in mid-summer, at the completion of twig elongation.

Sheet ______ of ______

GRAZING EXCLOSURE DATA SHEET
MATURE TREE STRATUM

Field Analyst____________________ Project____________ Date________________________
Exclosure_______________________ Compartment_________________ (upper) (lower) canopy

Species	Intercepts (m)									
	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2	I_1	I_2

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Figure 2.3-8. Data sheet for grazing exclosure mature tree stratum for RBOSP.

2.3.2.3 Results

Samples were collected near the end of the quarter as specified in section 2.3.2.2 and are presently being analyzed. Results will be reported in Progress Report-5.